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Lebanon National Health Accounts

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Executive Summary

The Lebanese Health Care System

Lebanon has a highly fragmented health care system. The war considerably weakened the institutional and financial capacity of the government and public sector and its role in the provision of health care services steadily declined. Non-governmental agencies and the private sector that saw a rapid increase in both their numbers and capacity filled the vacuum. Health care services have become increasingly oriented towards curative care with a rapid growth in the number of hospitals and centers for high technology services. Today ninety percent of hospital beds are in the private sector. The Primary Health Care system has remained weak. The private sector, especially NGOs, dominates this sector with public involvement being minimal. Private providers include private practitioners, dentists, pharmacists, and medical labs.

Health Care Financing

Lebanon has several different government, not-for-profit, and private for-profit financing schemes. These include:

(a) Two employment based social insurance schemes
(b) Four different schemes to cover the security forces
(c) The Ministry of Health financing that covers any citizen who is not covered under any other scheme. MOH payments are not dependent on the income of the beneficiary
(d) A growing private insurance market that is largely employment based
(e) Mutual funds
(f) Out-of-pocket expenditures

In 1998, the total expenditure on health care in Lebanon amount to 2,994,119 million LL (USD 1,916,079 million) and the per capita expenditures to 748,529 LL (USD 499). The total expenditure on health is 12.32 percent of the GDP and is higher than other countries in the regional National Health Accounts initiative. This also is significantly higher than previous

estimates that had placed health care expenditures at 9.4% of GDP. This level of expenditure is more in line with the United States and is higher than the average for OECD countries. The proportion of government budget allocated to health sector is a little over 6.5 percent. Public sources account for 17.98 percent, private sources for 80.06 percent of health care financing and international donors for the remaining 1.96 percent. The single largest source of financing comes from households which represents 69.74 percent of total expenditures. In terms of expenditures, public sector providers accounted for less than 2 percent, private sector providers for more than 89 percent, and others accounted for the remaining 9 percent. This pattern of expenditures is reflective of the fact that Lebanon relies largely upon the private sector for the provision of services, financing is fragmented, and there are inadequate supply side controls.

Main Findings

The main findings inferred from the two NHA matrices are summarized below:

Summary Statistics (FY1998)

Total Population:	4,000,000
Total Health Expenditure:	2,994,118,532,000 LL (1,996,079,000 USD)
Per Capita Expenditure:	748,529 LL (499 USD)
Total GDP	24,300,000,000,000 LL (16,200,000,000 USD)
Health Expenditure as Percent GDP:	12..32 %
Percent GOL budget allocated to health:	6.6 %
Sources of Funds:	
Public:	17.98 %
Private:	
Households	69.74%
Employers	10.32 %
Donors:	1.96%
Distribution of Health Care Expenditures	
Public Hospitals	1.7%
Private Hospitals	22.8%
Private Non-Institutional Providers	41.0%
Pharmaceuticals	25.4%
Others	9.1%

Insurance Profile of Population

There exists a fair amount of disagreement on the proportion of the population covered by various financing agencies. As part of the NHA activity we attempted to estimate this by obtaining information directly from the financing agencies as well as analyzing data collected from the NHHEUS. According to the NHEEUS, 46.8% of the popualation reported having some form of insurance (either social or private). If one excludes the non-Lebanese population that is estimated at 7.6% the government is responsible for the remaining 45.6% of the population. There also is a fair amount of georgraphic variation in the profile of the insured by Mohafazat or governorate. The highest proportion of the population covered is in Beirut and Mount of Lebanon with the lowest coverage in Bekaa and Nabatyeh.

We obtained information on the proportion of the population covered by various financing agencies from these agencies. This information was then compared with information from the NHHEUS. The most striking difference is observed in the coverage rates under NSSF. According to their estimates roughly 26.1% of the population is covered under the NSSF scheme. However, the household survey numbers show a lower coverage rate at 17.8%. The household survey results for other categories (Army and Private Insurance) closely match known figures.

Expenditures by Public Financing Agents

Expenditures on hospital care by public financing agents are very high. Overall, 62 percent of public health expenditures is spent on hospital based care, 10% on ambulatory care, 13% on pharmaceuticals, other goods accounts for 13%, 11% on administration, and 3% on capital investment. In the case of the Ministry of Health 71% of its budget is used to pay for hospital based care. Expenditures on primary health care services are a sub-set of that on non-institutional health care providers and accounts for less than 5% of public expenditures. The Ministry of Health has not been able to disburse all amounts allotted to primary health care and in some cases these resources have been diverted to curative care services.

The Ministry of Health

In Lebanon the Ministry of Health is the insurer of last resort. The Ministry of Health funds the hospitalization costs for any citizen who is not covered under an insurance plan (social or private). This coverage is independent of the income and asset status of the individual. In addition the Ministry of Health also covers the cost of some narrow specialties such as chemotherapy, open heart surgery, dialysis and renal transplant, and drugs for chronic diseases. Even as the responsibility of the Ministry of Health has grown its share of the Government of Lebanon's budget has declined from over 5% in the early 1990s to around 3% in 1998.

The amount the Ministry of Health spends on curative care in the private sector has ranged from a low of 72% in 1995 to a high of 84% in 1993. Quite clearly, many of these programs such as open heart surgery, kidney dialysis, kidney transplantation, and treatment of burns affects very few persons and yet consumes about 20% of the Ministry of Health's budget. One possible explanation for the reduction in the share of hospital expenditures between 1997 and 1998 might be the decision of the Ministry of Health to pay for same day surgery. This needs further investigation. The amount spent on open-heart surgeries declined in 1998. This is attributed to the change in reimbursement method for these procedures that now pays on a capitated basis.

The Ministry of Health has been incurring deficiits due to its increasing commitments to special programs, a growing awareness among the people that the Ministry paid for hospitalization costs, and its inability to curb hospital costs. The deficit was worst in 1997 when it was equal to nearly 60% of the budget. The Ministry of Health has responded to these deficits by delaying reimbursing hospitals for their services and making deductions in the reimbursements. On the one hand hospitals complain that they are not getting reimbursed for services and on the other the Ministry feels that hospitals tend to over prescribe services.

The Hospital Sector

There are a total of 167 hospitals with 11,533 beds in Lebanon. Twelve percent of the hospitals and ten percent of the beds are in the public sector. The predominance of the private sector

reflects the results of a financing arrangement where the public sector purchases services from the private sector, lack of coordination on provider payment and rates amongst public sector payers, and the significant investments made by the private sector in the hospital sector. The private hospital association is a powerful lobby and controlling hospital expenditures has been a policy concern for some years. Lebanon has 2.88 beds per 1000 population making this one of the highest ratios in the Middle East. However, the beds are not uniformly distributed. As example, Mount Lebanon has 6.55 beds per 1000 population and Nabatieh has only 0.86 beds per 1000 population. Sixty-seven percent of the hospitals in Lebanon have seventy beds or less, 30% have between seventy-one and two hundred beds, and only 3% have more than two hundred beds. All of the hospitals with over two hundred beds are in the private sector. The high percentage of hospitals with fewer than seventy beds and the fact that they tend to be multi-specialty facilities means that it is difficult to achieve economies of scale leading to inefficiencies. Quality of care and financial viability in these facilities also remains a concern.

Analysis of Hospital Bills

For the first time, as part of the National Health Accounts activity, a sample of hospital bills paid by government agencies was analyzed to better understand their breakdown. It was seen that 73% of the amount Ministry of Health's reimbursements for hospital care was on surgical care and the remaining 23% were for non-surgical care. The CSC spent 59% of its hospital reimbursements for surgical care, the ISF 53%, the Army 51%, and the NSSF 60%. This distribution probably reflects the fact that the Ministry of Health is the insurer of last resort and hence tends to pay more for inpatient admissions. With regard to the other agencies hospitalization costs are part of the benefits available to their beneficiaries.

Distribution of costs associated with hospitalization by category of service was also studies. An interesting finding is that diagnostic tests accounted for 19.4% of the costs and drugs and medical supplies for 25.1% of costs. Surgery costs were 15.0% of total costs, Operation Theater accounted for 11.0% of costs, and room and board was 15.9% of costs. Doctor fees were only 8.0% of the costs. These findings would appear to support the perception that hospitals tend to perform large number of investigations and prescribe a number of drugs for each episode of hospitalization as a means of optimizing their revenues. The findings from the analysis of the

sample of hospital bills will be very relevant to the discussion on hospital reimbursements and reforming health care financing.

Private Insurance Market

The private insurance market is growing rapidly in Lebanon. Compared to other countries in the region, Lebanon has a fairly well developed private insurance sector. Approxmiately 70 private insurance companies provide health insurance and are licensed by the Ministry of Economy. They provide both complementary and comprehensive health insurance policies. It is estimated that 8% of the population has comprehensive coverage and 4.6% gap insurance. Expenditures on private insurance as a percentage of GDP in Lebanon is higher than other countries in the region such as Kuwait and Egypt.

The insurance market is highly fragmented with 9% of companies reporting premium income between USD 5-50 million, 49% have premiums between USD 1-4 million, and others had premiums of less than USD 1 million. Of the 70 health insurance companies in Lebanon, 17 are associated with MedNet which in turn reinsures its book of business with MunichRe. The growing Private Mutuelle sector is in competition with the private insruance market. Private Insurance companies have a legitimate concern that preferential tax treatment provide mutuelles with an undue advantage. Insurance policies in Lebanon typically cover in-patient care. Outpatient services are covered for an additional premiums with co-payments of around 20%.

There is anecdotal evidence that private insurance companies transfer the burden of high cost cases to the Ministry of Health as the latter does not have the ability to verify whether applicats have insurance or not. Estimates of the breakdown of expenditures by private insurance companies by type of service shows that phycian fees account for 30% of expenses, pharmaceuticals for 31%, hospitalization costs for 15%, and administrative expenses for 24%. Many insurance companies still consider health to be a loss leader.

Estimating Premiums for Private Insurance

Insurance companies are extremely reluctant to share information on premiums, claim payments, loss ratios, and profits. Different approaches were taken under the NHA activity to obtain this information. These included directly contacting private insurance companies, contacting the Ministry of Economy (that controls insurance companies), hiring consultants to conduct studies of the private insurance market. None of these efforts were successful in obtaining information from the private insurance companies. Given the rapidly increasing share of this sector and the potential impact insurance can have on utilization and costs there is a need for greater transparency in this sector.

Two indirect methods were used to estimate premiums. Both these are explained in greater detail in the section on private insurance. The first can be described as a bottom-up approach. This combined data from Mednet Liban and the household survey to arrive at an estimate of roughly 362,000,000,000 LL. This includes what employers spend directly on health care for their employees. The other was a more top down approach. This used the household survey to estimate total household payments for insurance premiums. From this was deducted household payments to Mutuelles and NSSF. This gave household contributions towards private insurance premiums. To this was added the estimate of how much employers paid for private insurance. This method lead to an estimate of roughly 334,000,000,000 LL. If to this we add the 44 billion pounds that employers directly on health services for their employees we observe that the two estimates are very similar.

The Pharmaceutical Sector

In 1998, pharmaceutical expenditures accounted for over 25% of total health expenditures. Consderable uncertainty exists about the size and composition of the pharmaceutical sector in Lebanon. Ninety-eight percent of the pharmaceuticals sold in Lebanon are trade names with generics accounting for only 2%. Imported drugs account for 94% of consumption with locally manufactured drugs making up only 6% (some studies and estimates put this as high as 14%). Thus, Lebanon has not only high per capita expenditures on pharmaceuticals (USD 120) but almost all of the drugs are trade name products that are imported into the country. Expenditures

on pharmaceuticals have been increasing at 7% per annum a figure that is higher than the rate of inflation. Household out-of-pocket expenditures account for 94% of the spending on pharmaceuticals.

The growth in expenditures on pharmaceuticals has been accompanied by a rapid increase in the number of pharmacies in Lebanon. Between 1995 and 1998 the number of pharmacies in Lebanon rose by 59% and the number of registered pharmacists grew by 34%. In North Lebanon the number of pharmacies nearly doubled, in Bekaa the increase was 73%, in Mount Lebanon 55%, and even in Beirut there was an increase of 28%.

Analyzing consumption of pharmaceuticals by therapeutic class shows that antibiotics account for 18%, followed by anti-inflammatory at 14%, and cardiology-hypertension at 9%. Vitamins account for 6% of all drugs. A rather surprising finding is that Steroids account for 5% and anatacids for 4%

Estimating the Size of the Pharmaceutical Sector

In order to better estimate the size of the pharmaceutical market we analyzed the IMS Health Data. In addtion to the analysis of the data provided by IMS we also examined other studies of the pharmaceutical sector including those conducted by the task force on Pharmaceuticals of the World Bank Project. As part of the NHA activity we obtained information on pharmaceutical expenditures from all public entities. The household survey provided information on out-of-pocket expenditures on pharmaceuticals. We observe that estimates of the size of the market range from a low of 441,965,000,000 LL to a high of 759,053,247,000 LL. A number of reasons might account for this difference. First, the size of the pharmacuetical market in Lebanon might have been underestimated by previous studies. Second, households might be over reporting the amount they spend on drugs and might be including items such as food supplements that other studies exclude. Even if this were to be the case the differences are far too large to be explained away. Two other reasons might also account for these differences. One is that there might be a parallel import of drugs into the country. This could be in the form of donations received by NGOs that might bypass normal channels. Finally, there might be some double billing taking

place. It is probably a combination of the various factors mentioned above that explains the differences between the estimates.

However, it is clear that at 25 percent to total health expenditures pharmaceutical expenditures are a major area of the health sector that needs to be better managed and regulated if health care costs are to be held in check. The rapid growth in the pharmaceutical sector, the near complete reliance on brand name drugs, and imports to meet demand make rationalizing expenditures on pharmaceuticals a key area for policy intervention.

The Households

Household out-of-pocket expenditures amounted to 69.74% of total health expenditures. This is significantly higher than previous estimates that had place out-of-pocket expenditures at around 53% of total health expenditures. This steep increase in household expenditures has important policy implications. A National Household Health Expenditure and Utilization Survey (NHHEUS) has recently been completed. This represents the first time a health specific survey has been conducted in Lebanon. A detailed report presenting the main findings from the household survey will be published shortly. For the purposes of the NHA report we will be using a few select figures on utilization and expenditures.

Health Care Utilization

On average Lebanese used 3.6 outpatient visits per year, with males using 3.1 visits per capita per year and females 4.1 visists per year. While regional disparities exist in use rates these do not appear to be significant. This probably reflects the presence of a well developed market for health services (in the private, NGO, and public sectors). An intersting finding is that unlike many other counties lower income individuals have higher use rates than those in higher income groups. Jordan is the other country in the region where similar results have been observed. This indicates that there does not appear to be inequities in access to health services if these are measured by use rates. However, as we will see later there might be inequities in the burden of out-of-pocket payments. Looking at use rates by age group it is seen that those over the age of sixty and those less than the age of five have the highest use rates. Other than those below the age of five use rates for females tends to be higher than males. Those who have insurance have higher use rates than the uninsured.

When examining hospitalization rates once again one does not see inequities in use rates though those with insurance do tend to have a higher use of hospital services than those that are unisured. The age differences persist as in the case of outpatient care. The fact that lower income households have higher use rates than those with higher incomes quite likely relflects the fact that the government as the insurer of the last resort pays for hospital care for all uninsured in Lebanon. Thus those needing hospital care can either use insurance (social or private) or approach the Ministry of Health for finances.

With regard to the use of Day Surgery, while the elderly have higher use rates than other age groups one does not observe the differences by insurance status as was seen in the case of outpatient care and hospitalization. This is likely because most insurance policies do not cover day surgery.

With dental treatment an interesting observation is that the highest use rates are to be found in the Mount of Lebanon. As dental care is not covered under most insurance policies this probably reflects the fact that the largest number of dentists are to be found in the Mount of Lebanon area. Contrary to the trend with regard to other services the elderly use far less dental care than those in the age group fifteen to fifty-nine. Similary, those in the lower income groups use less dental care than those in the higher income groups. While some of this might be a function of greater awareness the findings for income and age likely likely indicate a lack of access (due to the inability to pay).

Choice of Provider by Type of Service

The household survey only reinforces the fact that the private sector dominates the market in Lebanon. Seventy-eight percent of outpatient visits took place in the private sector, followed by the NGO sector at 12%, with the Public sector accounting for only 9% of all visits. With regard to hospitalizations the private sector once again accounts for nearly 86% of all admissions with the Public sector accounting for 9%. Some questions have been raised about the rather large share for NGO hospitals and this will be examined in greater details when the final analysis of the NHHEUS data is conducted. The Public Sector fares a little better when it comes to one day

surgery probably because it both pays for this as well provides these services at its facilities. Dental care is almost exclusively the domain of the private sector. This predominance of the private sector in Lebanon makes it clear that any attempt at containing costs and improving efficiency will require the participation and buy-in of the private sector. At the same time unless this sector is better managed meaningful changes to the health system cannot be achieved.

Out of Pocket Expenditures

Unlike use rate where one did not observe inequities in access the examination of expenditures does raise some equity concerns. On average Lebanese households spend 2,609,000 LL per year on health care. However, households in the Mount of Lebanon spend nearly twice as much on health as households in the North of Lebanon. Similary, one observes a clear correlation between household income and health expenditures. Households with lower incomes spend far less on health care than those with higher incomes. This inspite of the fact that they tend to use more health services on a per capita basis than higher income households.

Per capita expenditures amounted to 522,000 LL per year. Of these 15% was spent on insurance, 10% on hospitalization, 2% on one day surgery, 22% for dental care, 25% for outpatient care (exlcuding drugs), and 27% on drugs. Once again the expenditures on pharmaceuticals only reinforces the need to better manage and control this sector. Similary, the high share of dental expenditures coupled with the access issues observed earlier point probably point to the need to find ways of increasing insurance coverage for dental care.

Households spent a total of 2,088,000,000,000 LL for health services. This was 69.74% of total health expenditures. Of this 97% was spent in the private sector, 2% in the NGO sector, and just 1% in the Public Sector.

On average, households spent a little over 14% of their household expenditures on health services. However, the burden of out-of-pocket expenditures as measured as a proportion of household expenditures is not equitably distributed. It is seen that nearly a fifth of expenditures in households in the lowest income category went to heatlh. The proportion spent on health goes

down with income and households in the highest income group spend only 8% on health care. Even though there might not be inequities in access as measured by per capita use rates the burden of out-of-pocket expenditures is inequitably distributed. While the Ministry of Health pays for hospitalization costs of the uninsured (including the poor) there is probably a need to develop a targeted financing scheme that assures financial access to health services for low income families.

Main Policy Issues

Some of the key policy issues that stem out of the NHA findings are listed below:

- **Sustainability:** According to the Lebanon NHA estimates, Lebanon spends over 12 percent of its GDP on health care services. The poor performance of the economy, high net public debt, and recently introduced higher pay scales for public sector employees are all bound to put increasing pressure on the government budget. While important health problems are still related to infectious diseases, chronic and degenerative diseases are becoming more prevalent. The causes for this are the aging of the population, changing dietary habits, and changes in lifestyle concomitant with urbanization , and issues such as diabetes, and hypertension. Unless there are significant gains in the country's economic performance, the current pattern of health care expenditures (as a percent of GDP) will cause significant strain on scarce health resources. In the long-term, this will likely adversely affect the current level and quality of services provided.

- **Cost Containment:** The Lebanese health care system is an example where the financing and provision functions are separated but without effective supply side controls to contain costs. The public financing agencies purchase health services from the private sector. Private sector providers are reimbursed using a combination of capitation and a fee-per-service basis, which may provide them with an incentive to provide unnecessary services. The most expensive health services (cancer, dialysis, kidney transplant, open heart surgery, chronic diseases, and burns) are provided either free or at minimal copayment by government agencies. The Ministry also pays for hospitalization costs for all uninsured and given data gaps it is possible that private insurance shifts the burden of high cost services to it. All of these factors contribute to cost escalation. *Provider Payment reforms are key to cost containment*. In this

regard the Ministry of Health started implementing a flat rate system for same day surgical procedures in May 1998. An analysis conducted on the potential impact of extending this to other surgical procedures indicated that this might lead to lower costs.

The Table below shows that each of the principal financing intermediaries has a separate supervising Ministry. This makes inter-agency coordination difficult. At a minimum consideration should be given to setting up an institution that can coordinate payments, monitor utilization, and oversee providers across the different public financing agencies.

Table: Financing Agents and their Supervisory Ministry

Financing Agency	Supervising Ministry
NSSF	Ministry of Labor
CSC	Presidency of the Council of Ministers
Army	Ministry of National Defense
ISF	Ministry of Interior
GS+SS	Ministry of Interior
Private Insurance	Ministry of Economy and Commerce
Mutual Funds	Ministry of Housing and Cooperatives
MOH	Ministry of Health

Source: Ammar et.al., 1999

Centralized budgeting and managerial controls extend little authority and discretion to managers of public facilities. Hence, managers are provided with few incentives to engage in cost containment efforts. The Ministry of Health has initiated efforts to make its hospitals autonomous. This effort needs to be strengthened and expanded.

- **Rationalizing Capacity in the Hospital Sector**: The Lebanon NHA findings draw attention to the fact that 62% of public expenditures are spent on hospital care. Indiscriminate capital investment in the private hospital sector and little regulation has resulted in a surge in the number of private hospitals. With 2.88 beds per 1000 population Lebanon has the highest

ratio of bed to population among MENA countries participating in the regional NHA initiative. However, 67% of these beds are in hospitals with less than 70 beds. This coupled with the multi-specialty nature of these facilities leads to inefficiencies. Quality of care and financial viability of many of these facilities remains a concern.

- **Reallocating expenditures from Curative to Primary Health Care:** Under the present breakdown of expenditures, less than 10 percent of resources are allocated to primary health care. Not only are few resources spent on primary and preventive health care services it appears the NGO and public systems do not have the capacity to fully utilize these resources. Investments in preventive measures (including changes in lifestyle) are likely to result in substantially limiting curative expenditures in the future. In the wake of the rapid expansion of the curative sector, the primary health care sector has languished. There is a need to both strengthen the capacity of the system to deliver primary health care services as well as increase funding for these services.

- **Controlling Capital Investment in Medical Technology:** The Lebanon NHA study reiterates previous findings that government reimbursements for high cost services has resulted in a rapid growth of high technology centers. This in turn has contributed to cost escalation. As example, as the number of centers capable of doing open-heart surgeries grew from 3 to 8, the number of surgeries performed increased from 600 to 1800, and expenditures rose from 8 billion pounds to 25 billion. The Ministry of Health spends about 75% of its budget on paying for curative care in the private sector. For efforts at cost containment to be effective policies need to be developed that will control investments in medical technology.

- **Rationalizing Expenditures on Pharmaceuticals:** Pharmaceuticals accounted for over 25% of total health expenditures. Ninety-eight percent of the pharmaceuticals sold in Lebanon are trade names with generics accounting for only 2%. Imported drugs account for 94% of consumption with locally manufactured drugs making up only 6%. Thus, Lebanon has not only high per capita expenditures on pharmaceuticals (USD 120) but almost all of the drugs are trade name products that are imported into the country. Expenditures on pharmaceuticals have been increasing at 7% per annum a figure that is higher than the rate of inflation. Between 1995 and 1998 the number of pharmacies grew by 59% and the number of

registered pharmacists grew by 34%. Further we saw that estimates on the total size of the market vary significantly. While some of this might be explained by the fact that households might be over reporting expenditures on drugs there exists the possibility that drugs are either making their way into the country bypassing official channels or there is some double billing taking place. The high level of expenditures also is likely due to the lack of a significant policy for using generic drugs, as substitutes for other equivalently higher prices prescription drugs. Hence, to effectively contain overall health care expenditures, the Government of Lebanon should initiate policies for improving the efficiency by which pharmaceuticals are imported, distributed and sold in the country and improve its management and oversight of this sector.

- **Expanding health insurance coverage to the uninsured and limiting multiple coverage:** In Lebanon health insurance is tied with employment and those in low income households are less likely to be employed in the formal sector. Further the presence of multiple insurance coverage also allows for inefficiencies, double dipping, over consumption of health services, and cost escalation. It is very difficult to obtain information from private insurance companies on premiums, claims, loss ratios, and profits. The government needs to improve its management of the private insurance market and reduce multiple insurance coverage if it wants to control health care costs.

- **Equity:** Household out-of-pocket expenditures account for 69% health expenditures in Lebanon. The household survey shows that there does not apper to be inequities in access to health care. Lower income households tend to use more health care per capita than higher income households. It is only with regard to dental care that we observe inequities in access. However, when one analyzes the burden of out-of-pocket expenditures it is appears the burden is inequitably distributed with lower incomes households spending a much greater proportion of their incomes on health than higher income households. Even though the Ministry of Health as the insurer of last resort pays for hospitalzation costs for all insured (including those with low incomes) there is no formal financing mechanism for primary and preventive health services. As part of the health financing reform the government might want

to consider designing a targeted program to provide quality basic health services for those with low incomes.

1. Main Report

Socio-economic background

2. Background

Lebanon is a middle income country with a population estimated at 4 million over 80% of whom live in urban areas (Central Administration of Census, 1997). Before the civil war, the Lebanese economy was robust, enterprise flourished, and it was the banking center of the Middle East. The civil war, which began in 1975, led to the relocation of many service sectors out of the country, much of the industrial and agricultural infrastructure was destroyed, the economy went into decline (E.I.U. Country Profile, 1992-93).

Increased spending on defense and the reduction in government revenues from taxes and other duties led to a steep increase in public debt, which rose from 14 billion Lebanese pound in 1982 to 7.9 trillion Lebanese pound in 1994 and 28.9 trillion Lebanese pound in 1998 (Table 1). Thus in 1998 the net public debt stood at 7.2 billion Lebanese pounds per capita, net public debt amounted to 119% of GDP and debt servicing accounted for a little over 13% of the GDP.

Table 1: Public Finance Indicators: Public Finance, 1994-first semester 1998

	1994	1995	1996	1997	1998
Public Revenues (LL Billions)	2241	3033	3533	3753	4430
Public Expenditures (LL Billions)	5204	5856	7225	9162	7816
Public Deficit (LL Billions)	2963	2823	3692	5409	3386
Net Domestic Public Debt (LL Billions)	6712	9287	13358	18381	19544
External Public Debt (US$ Millions)	859	1305	1998	2435	4177
Net Public Debt (LL Billion)	7983	11369	16545	22094	28825
Debt Service (LL Billion)	1488	1875	2653	3378	3214

Source: Lebanon Development Cooperation Report, UNDP 1999

Table 2 provides estimates of the gross domestic product and the real rate of growth between 1994 and 1998. Since 1994 real growth rate has decreased each year and in 1999 the country

went in to recession. The fall in performance was the result of a number of factors including a drop in consumption and investment, uncertainty caused by the repeated Israeli attacks, and the weak performance in most of the economic sectors (UNDP, 1999).

Table 2: Gross Domestic Product (Millions of Dollars)

Year	GDP (US$)	Real Growth Rate (%)
1994	9110	8.0
1995	11122	6.5
1996	12996	4.0
1997	14957	3.5
1998	16200	3.0
1999*	17200	2.0

*Planned, five years fiscal reform plan
Source: Lebanon Development Cooperation Report 1999 / UNDP
Ministry of Finance

The poor performance of the economy, high net public debt, and higher pay scales for public sector employees effective January 1, 1999 are all bound to put increasing pressure on the government budget. This in turn might affect public outlays to social sectors such as health and education. A systematic assessment of national expenditures (both public and private) on health using a National Health Accounts framework becomes of even greater importance in the current context.

3. Health and Demographic Status

The last population census was carried out in 1932. Recently two major surveys were condcuted-- the PAPCHILD survey of 1996 covering 6,000 households and the UNFPA Population and Housing survey of 75,000 households. The latest estimates place the population at four million (Central Administration of Statistics, 1997). Of these, 93% are Lebanese citizens. Twenty-eight percent of the population is under the age of 15 and 10% over age 60. Population has been growing at 1.6 percent per year and Total Fertility Rate is 2.7.

Tables 3 shows that with regard to key health and demographic indicators, Lebanon fares better than most other Middle Eastern countries.

Table 3: Outcome indicators in selected Middle Eastern countries (1997)

Category	Egypt	Syria	Jordan	Lebanon	Lebanon(1998)
Birth Rate, crude (per 1,000 people)	25	29	31	22	23.5
Death Rate, crude (per 1,000 people)	7	5	4	6	6.5
Life expectancy at birth, total (years)	66	69	71	70	70
Mortality rate, infant (per 1,000 live births)	51	31	29	28	28
Mortality rate, under-5 (per 1,000 live births)	66	38	35	32	32

However, there are still significant variations across the geographical regions of the country. A study conducted by UNICEF showed that even though infant and under-five mortality was low for the country as a whole, differences existed among regions. The Bekaa and Northern regions account for most of the under-five mortality. Similarly, in undeserved regions vaccination coverage tends to be lowe. The Ministry of Health has initiated targeted campaigns to reduce these disparities.

Table 4 provides some selected demographic and health indicators. It shows steady increases in life expectancy and a steady decline in morality rates. The demographic transition has been accompanied by an epidemiological transition. While important health problems are still related to infectious diseases, chronic and degenerative diseases are becoming more prevalent. The causes for this are the aging of the population, changing dietary habits, and changes in lifestyle concomitant with urbanization. Prevalence rates for hypertension and diabtes are on the rise in Lebanon. In addition there are 4,000 – 5,000 new cases of cancer each year. Concerning AIDS, there were 3.1 cases per 100,000 people in 1997.

Table 4: Selected Outcome Indicators for Lebanon

Series	1980	1990	1993	1994	1995	1996	1997
Life expectancy at birth, **female** (years)	67	70	-	-	-	-	72
Life expectancy at birth, **male** (years)	63	66	-	-	-	-	68
Life expectancy at birth, total (years)	35	68	-	-	-	-	70
Mortality rate, adult, **female** (per 1,000 female adults)	181	150	-	-	-	-	134
Mortality rate, adult, **male** (per	241	210	-	-	-	-	177

1,000 male adults)							
Mortality rate, infant (per 1,000 live births)	48	36	-	-	-	-	28
Mortality rate, under-5(per 1,000 live births)	-	40	-	-	-	-	32
Mortality ratio, maternal(per 100,000 live births)	-	300	-	-	-	-	104

4. The Labor Market in Lebanon

In 1997, 1.2 million Lebanese were employed and of these 79% were males and 21% were females. The overall reported unemployment rate is fairly low at 8.9% for males and 7.2% for females. The highest unemployment rate is in the age group twenty to twenty-four. Only 14% are employed in the public sector. The private sector accounts for 80.5% of total employment with the percentage being higher among males than females. Of those employed 65% were in salaried jobs, 25% worked independently, 7% owned their own enterprise, 2% worked as family aids and less than 1% as interns. An interesting statistic is that there were no female owned enterprises in 1997. This is probably due to regulatory requirements. The presence of a significant salaried class should theoretically make this category of people easier to target for collection of taxes and other levies. Finally, analyzing by area of employment shows that for the overall population the highest concentration was in business followed by industry, construction, public administration, and education. The employment profile for males showed the greatest concentration in business followed by industry, construction, agriculture and fishery, and public administration. For females the greatest concentration was in education, followed by business, house helpers, and industry.

5. Health Sector

5.1 The Lebanese Health Care System

Lebanon has a highly fragmented health care system. The war considerably weakened the institutional and financial capacity of the government and public sector and its role in the provision of health care services steadily declined. In the early 1970s public hospitals like Baabda, Quarantina, Zahle and Saida had more than 150 beds each. After the war these hospitals were left with a capacity of 20 beds each and poor quality of services (Ammar et.al. 1999). Non-governmental agencies and the private sector that saw a rapid increase in both their numbers and capacity filled the vacuum.

Health care services have become increasingly oriented towards curative care with a rapid growth in the number of hospitals and centers for high technology services. Today ninety percent of hospital beds are in the private sector. Table 5 shows the availability and distribution of high technology services and equipment. The emphasis of the private sector in investing in high cost sophisticated services is evident. One study found a strong correlation between the opening of open-heart surgery centers, number of operations performed, and expenditures: as the number of centers capable of doing open-heart surgeries grew from 3 to 8, the number of surgeries performed increased from 600 to 1800, and expenditures rose from 8 billion pounds to 25 billion pounds. Private sector investments have been concentrated in urban areas and poorer regions of the country remain under-served.

Table 5: Growth in Number of High Technology Centers 1997-1998

	Number of Centers (1997)	Number of Centers (1998)
Open Heart Surgery	12	16
Cardiac Lab	19	24
Linear Accelarator	6	*6*
Bone Marrow Transplant	2	*2*
Lithotripsy	27	27
Dialysis Centers	39	45
Kidney Transplant	3	*3*
Specialized Center for Burned	2	*2*

In vitro Fertilization	12	*12*
CT Scan	54	60
MRI	12	16
Total	188	213

Source: NHA Matrix

The Primary Health Care system has remained weak. The private sector, especially NGOs, dominates this sector with public involvement being minimal. Private providers include private practitioners, dentists, pharmacists, and medical labs. NGOs own over 80% of the 110 Primary Health Care Centers and 734 dispensaries spread across the country. NGOs have contributed successfully to joint preventive programs carried out by the MOPH and UN Agencies. As example, over 200 centers owned and operated by NGOs are affiliated to the reproductive health program and undertake family planning activities, provide antenatal care. NGOS also support the health system by conducting surveys and training programs and provide logistical support by purchasing and distributing essential drugs through a vast network of PHC centers (UNDP, 1997). Ambulatory services tend to respond to consumer demand. Follow-up and continuum of care remain weak, quality of care varies significantly across providers, and community involvement is limited.

5.2 Health Care Financing

In 1998, the total expenditure on health care in Lebanon amount to 2,994,119 million LL (USD 1,916,079 million) and the per capita expenditures to 748,529 LL (USD 499). The total expenditure on health is 12.32 percent of the GDP and is higher than other countries in the regional National Health Accounts initiative. This also is significantly higher than previous estimates that had placed health care expenditures at 9.4% of GDP. This level of expenditure is more in line with the United States and is higher than the average for OECD countries. The proportion of government budget allocated to health sector is a little over 6.5 percent. Public sources account for 17.98 percent, private sources for 80.06 percent of health care financing and international donors for the remaining 1.96 percent. The single largest source of financing comes from households which represents 69.74 percent of total expenditures. In terms of expenditures, public sector providers accounted for less than 2 percent, private sector providers for more than

89 percent, and others accounted for the remaining 9 percent. This pattern of expenditures is reflective of the fact that Lebanon relies largely upon the private sector for the provision of services, financing is fragmented, and there are inadequate supply side controls.

Lebanon has several different government, not-for-profit, and private for-profit financing schemes. These include:

(f) Two employment based social insurance schemes
(g) Four different schemes to cover the security forces
(h) The Ministry of Health financing that covers any citizen who is not covered under any other scheme. MOH payments are not dependent on the income of the beneficiary
(i) A growing private insurance market that is largely employment based
(j) Mutual funds
(k) Out-of-pocket expenditures

(e) The Social Insurance Schemes: The two employment based social insurance schemes are: the National Social Security Fund (NSSF) and the Civil Servants Cooperative (CSC). The NSSF covers employees (and their family members) working in the formal private sector as well as contracted employees and wage earners in the public sector. The Civil Servants Cooperative (CSC) covers government employees and their family members. Table 6a shows that 26% of the population was covered under NSSF and 8.8% under CSC. It is important to note that the information on the number of beneficiaries is not always available and in some instances the agencies base their estimates on the number of primary enrollees. Coverage under the NSSF scheme ceases once the employee retires. Thus, at the time when health needs are the greatest and the ability to pay limited there is no insurance coverage.

NSSF premiums towards health care benefits amount to 15% of salary, 12% being the employer share and 3% that of the employee (Decree Numbers 2195 and 3686). If an employer offers his employees private insurance to cover either the gap in NSSF coverage or full coverage then he still has to pay a fee to the NSSF. For full coverage this is 170,000 LL per employee per year. In this case the NSSF is responsible for paying only for open-heart surgery, dialysis, and kidney

transplant (NSSF). The CSC does not require any contribution from employees and covers all ambulatory and hospitalization services.

(b) There is one scheme each to cover the four arms of the security apparatus (army, internal security force, general security, and state security). These are funded by general tax revenues and cover all ambulatory and hospitalization services. There are no copayments or deductibles. Between them they covered 11.1% of the population.

© Private insurance has witnessed a rapid expansion in Lebanon. Insurance policies either provide complete coverage or fill in the gaps in social insurance coverage. It is estimated that roughly 8% of the population has complete coverage and 4.6% of the population has coverage that complements (fills gaps) other insurance. The private insurance market is inadequately regulated. Consequently, insurers indulge in “cream skimming”, selecting only good risks and either denying coverage or setting very high premiums for individuals with pre-existing conditions.

(d) The Ministry of Health funds the hospitalization costs for any citizen who is not covered under an insurance plan (social or private). This coverage is independent of the income and asset status of the individual. In addition the Ministry of Health also covers the cost of some narrow specialties such as chemotherapy, open heart surgery, dialysis and renal transplant, and drugs for chronic diseases. Until 1992 the Ministry covered a 100% of the costs. Subsequently a 15% copayment has been introduced. However, in many instances the benefit offered by the Ministry of Health is superior to the coverage under either the social insurance schemes or private insurance and individuals prefer using the Ministry of Health to pay for care.

(e) Tax laws that provide tax-breaks to non-profit groups have lead to a proliferation of mutual funds that offer health insurance coverage to their enrollees. Recent estimates would indicate that about 65,000 individuals were covered for health benefits by mutuelles. However, the number of enrollees ranges from as low as sixty-six to twelve thousand. Mutuelles collected 17,380,230,000 LL (USD 11,586,820) in premiums and paid out 13,871,047,500 LL (USD 9,247,365) in benefits. This amounts to a loss ratio of eighty percent. Some of the mutual funds have been established exclusively to provide gap-insurance coverage thereby negating the impact of

demand side interventions aimed at controlling over consumption of high cost health services. Private insurance companies feel the differential tax treatment distorts the playing field and the growth of mutual funds hampers the competitiveness of the insurance market.

(f) In spite of the numerous social and private insurance schemes direct household out-of-pocket expenditures account for nearly 70% of all health expenditures. These are spent on paying insurance premiums and directly on the purchase of health services from private practitioners and pharmacists. The burden of out-of-pocket expenditures is inequitably distributed with the poorest households spending a higher proportion of their incomes on health care as compared with higher income households. However, lower income households use more health care per capita than higher income families indicating that there might be no inequity in access as measured by use rates.

Insurance Profile of Population

There exists a fair amount of disagreement on the proportion of the population covered by various financing agencies. As part of the NHA activity we attempted to estimate this by obtaining information directly from the financing agencies as well as analyzing data collected from the NHHEUS. According to the NHEEUS, 46.8% of the popualation reported having some form of insurance (either social or private). If one excludes the non-Lebanese population that is estimated at 7.6% the government is responsible for the remaining 45.6% of the population. There also is a fair amount of georgraphic variation in the profile of the insured by Mohafazat or governorate. The highest proportion of the population covered is in Beirut and Mount of Lebanon with the lowest coverage in Bekaa and Nabatyeh.

Table 6a: Insurance Profile of the Population by Governorate

Governorate	Insured	Non-Insured	Missing
Beirut	53%	45%	2%
Beirut Suburbs	49%	49%	2%
Mount of Lebanon	52%	47%	2%
North of Lebanon	41%	57%	2%
South of Lebanon	51%	46%	3%
Nabatyeh	37%	61%	2%
Bekaa	36%	63%	1%
Total	46%	52%	2%

Source: NHHEUS

Table 6b shows the proportion of population covered by various financing agents as reported by these agencies and earlier estimates. The next table (Table 6c) provides the inforamtion as reported by the household survey. The most striking difference is observed in the coverage rates under NSSF. According to their estimates roughly 26.1% of the population is covered under the NSSF scheme. However, the household survy numbers show a lower coverage rate at 17.8%. The household survey results for other categories (Army and Private Insurance) closely match known figures.

Table 6b: Percentage of Population Covered by Various Financing Agencies

Financing Agency	Percent of Population Covered
NSSF	26.1%
CSC	4.4
Army	8.8
IS	1.9
GS+SS	0.4
Private Insurance	8.00 (complete coverage) 4.60 (gap insurance)
Mutual Funds	1.6
MOH	42.70

Source: NSSF, CSC, Army, IS, GS, and SS figures obtained from agency or DOS. Private Insurance figures obtained from article by Ammar et.al.

Table 6c: Percent of Population Covered by Various Financing Agencies (Based on Household Survey)

Type of Insurance	Alone	With another insurance	Total
NSSF	14.6%	3.2%	17.8%
Army	8.1%	0.0%	8.1%
Private Insurance	7.6%	0.7%	8.3%
CSC	4.3%	0.3%	4.6%
Complementary Insurance	2.5%		2.5%
Group Insurance	1.8%	0.1%	1.9%

Provided by Municipalities	0.4%		0.4%
Insurance at Work	0.8%		0.8%
Other Types of Insurance	4.8%	0.3%	5.1%
Total	44.9%	4.6%	49.5%

Source: NHHEUS

Note: This will add up to more than 46% because people have multiple coverage

Table 6d: Benefits under Various Public Financing Schemes

Type of Services	MOH	NSSF	CSC	Armed Forces
Hospitalization	85%	90%	90%	100%
Physician	No	Up to 20000 LL	75% up to 12000LL	Up to 20000LL
Specialist	No	Up to 30000 LL	75% up to 12000LL	Up to 30000LL
Ambulatory	No	Yes	90%	100%
Drugs	No	Yes	Yes	Yes
Emergency Clinics	No	as physician and specialist	as physician and specialist	as physician and specialist
Emergency Hospitals	Hospital	as Hospitalization	as Hospitalization	as Hospitalization
Dental Coverage	No	No	75% of tariff	100%
Ophthalmology	No	No	75% up to 35000LL	100/80/6000
Immunization	Yes at HC	No	No	No
Treatment Abroad	No	No	90% pre admission	$10000 pre admission
Open Heart	8,000,000LL	90%	As MOH	100%
Kidney Transplant	19,000,000LL	90%	As MOH	100%
Dialysis	135000LL/session	100%	100%	100%

Source: NHA

6. Profile of Health Sub-Systems in Lebanon

Following is a brief overview of the Lebanese health sector in terms of health services coverage, sources of financing, prevailing provider-payer relationships, and the size of operation of each of the health care sub-systems.

Profile of Health Sub-Systems in Lebanon

Benefits by Health Subsystems	Coverage/ Special Categories	Principal Financing Sources	Provider - Payer Relationship	Percentage of Population Covered or Eligible	Size of Operation
Describes types of services and benefits available.	Describes coverage and eligibility criteria, special programs for specific population groups	Describes main sources of financing	Describes relationship between financing and service delivery functions	No. of people covered or eligible by health system nation wide	As indicated by staff, beds, or number of facilities
Government Services/MOH					
a) Provides comprehensive public health services; primary, preventive and curative care b) Performs the following financing functions: • Hospitalization for anyone not covered under an insurance plan • Subject to limits and restrictions pays for chemotherapy, open heart surgery, dialysis, renal transplant, and drugs for chronic conditions	• Everyone not covered under an insurance plan • Highly subsidized primary and curative care for the entire population.	• Ministry of Finance (general tax revenues) • Co-payments for services • Donor assistance • World Bank loan	• Ministry of Health purchases services from private providers • The Ministry also runs hospitals where staff are paid on salary	43 percent of the population	• 9 working Public Hospitals (482 beds) • 23 Primary Health Care Centers • 176 Dispensaries
National Social Security Fund					
a) Curative care services, pharmaceuticals,	• Those working in the formal private sector, contracted	• Government budget • Pay roll taxes	Has own facility but largely purchases services from private	30 percent	• One Ministry of Health hospital is run under the

open heart surgery, kidney transplant, and renal dialysis b) Does not cover dental care, ophthalmology, immunization, and treatment abroad	employees, wage earners in the private sector • Dependents of Beneficiaries	• Co-payments	providers		director of NSSF
Civil Servants Cooperative					
a) Curative care including hospitalization, physician specialist, and ambulatory care, pharmaceuticals b) Subject to limits and restrictions covers dental care, ophthalmology, and treatment abroad c) Same benefit at MOH for open heart surgery, and kidney transplant. Full coverage for renal dialysis	• Covers government employees and their dependents	• Ministry of Finance • Copayments	Purchases services from the private sector	8.8% of population	

Armed Forces (Army, ISF, GS, SS)					
a) Curative care including hospitalization, physician specialist, and ambulatory care, pharmaceuticals b) Covers all dental care, and ophthalmic care with copayments c) Subjec to limit covers preadmission costs associated with treatment abroad d) Covers all expenses associated with open heart surgery, kidney transplant, and renal dialysis	Those employed in the army and security services and their dependents	• Ministry of Finance • Transfers from Ministry of Defense budget	The Army has its own facilities where employees are paid a salary. It also purchases services from the NSSF and in special cases the private sector	11% of population	Contracts: 1 Hospital
Private Health					
a) Owns and operates private clinics and hospitals for primary and curative care. b) Owns and operates pharmacies	• Beneficiaries of any private health plan self-insured. • Company employees and their dependents. • All citizens with willingness to pay.	• Direct out-of-pocket payments. • Payments from insurance plans. • Payments from employees and employers. • Payments from MOH, CSC, and other government agencies	Private hospitals & clinics, by contract. Fee-for-service, or through a third-party payer (government, insurance company or employer)	All citizens with a willingness to pay are eligible. Persons referred by MOH and other government agencies	• 147 hospitals with 10387 beds. This is 90% of the beds and 88% of hospitals • 1405 pharmacies and 3146 registered pharmacists • 110 Primary health care centers and 734 dispensaries

7. National Health Accounts Activity

Lebanon is one of eight countries[1] participating in the Regional National Health Account (RNHA) initiative, supported by USAID, World Bank, and World Health Organization (WHO). The exercise of generating Lebanon National Health Accounts is a collaborative effort between representatives of MOH, Army, Cooperative of Civil Servants, Internal Security Forces, NSSF, and WHO. The effort commenced in 1999 with the creation of a National Health Accounts effort and was lead by Dr. Walid Ammar the Director General of Health. The team was composed of Hisham Fakha (who coordinated the study for WHO), Osmat Azzam and Rita Khoury (Health Sector Rehabilitation Project), Col. Charbel Mattar (Internal Security Forces), Gen. Maher Halabi (Army), Dr. Doried Aoudat (Cooperative of Civil Servants) and Khaled Srour (NSSF) . Drs. Latiri and Abdel Hay Mechbal WHO country representatives, supervised the work of the team. The NHA team members attended both the regional NHA training workshops. Secondary data sources were identified and analyzed; data gaps identified; and survey and data collection instruments were developed. A systematic effort was undertaken to collect information from both public and private sectors. A National Household Health Care Utilization and Expenditure Survey was also completed with a view to get better information on out-of-pocket expenditures and insurance coverage. A survey of large firms and an analysis of the pharmaceutical sector also contributed to the finalization of the NHA report. The NHA team also adapted the classification system to the Lebanese situation (See Annex 1). This classification system was widely circulated and approved by the Ministry of Health and WHO.

[1] Other countries are Djibouti, Egypt, Iran, Lebanon, Morocco, Tunisia, and Yemen

Main Findings

The main findings inferred from the two NHA matrices, Tables 7 and 8, are summarized below:

Summary Statistics (FY1998)

Total Population:	4,000,000
Total Health Expenditure:	2,994,118,532,000 LL (1,996,079,000 USD)
Per Capita Expenditure:	748,529 LL (499 USD)
Total GDP	24,300,000,000,000 LL (16,200,000,000 USD)
Health Expenditure as Percent GDP:	12..32 %
Percent GOL budget allocated to health:	6.6 %

Sources of Funds:

Public:	17.98 %
Private:	
Households	69.74%
Employers	10.32 %
Donors:	1.96%

Distribution of Health Care Expenditures

Public Hospitals	1.7%
Private Hospitals	22.8%
Private Non-Institutional Providers	41.0%
Pharmaceuticals	25.4%
Others	9.1%

7.1 Analysis of Sources and Uses of Funds

As indicated in Tables7 and 8, the total expenditure on health care in Lebanon amount to 2,994,119 million LL (USD 1,996,079 million) and the per capita expenditures to 748,529 LL (USD 499). The total expenditure on health is 12.32 percent of the GDP and is higher than other countries in the regional National Health Accounts initiative. This level of expenditure is more in line with OECD countries. The proportion of government budget allocated to health sector is a little over 6.5 percent. Public sources account for 17.98 percent and private sources for 80.06 percent of health care financing. International donors account for the remaining 1.96 percent. In terms of expenditures, public sector

providers accounted for less than 2 percent, private sector providers for more than 89 percent, and others accounted for the remaining 9 percent.

Table 7: Sources of Funds to Financing Intermediaries, 000s LL, 1998

LL 000	TREASURY	PRIVATE SECTOR		DONORS ON HEALTH	TOTAL
		EMPLOYERS	HOUSEHOLDS		
Government of Lebanon					-
					-
					-
					-
Ministry of Health	261,279,802			49,639,500	310,919,302
Army (Ministry of Defense Health Budget)	58,840,910				58,840,910
Army (Ministry of Defense Drugs Budget)	10,000,000				10,000,000
Army (Ministry of Defense Admin Budget)	17,780,000				17,780,000
Internal Security Forces	39,708,969				39,708,969
General Security	6,000,000				6,000,000
Security of the State	2,400,000				2,400,000
Ministry of Social Affairs				1,213,500	1,213,500
Ministry of Displaced	230,000				230,000
Custom Duties Fund	1,300,000				1,300,000
					-
Social Health Insurance Institutions					-
					-
Civil Servants Co-operative	45,128,944				45,128,944
National Social Security Fund	79,334,000	173,434,000	43,358,000		296,126,000
Mutual Funds	16,470,000		17,380,230		33,850,230
					-
					-
Private/ for-profit enterprises					-
					-
Private Health Insurance schemes		91,416,265	242,461,770		333,878,035
Private Households' out of pocket			1,784,800,000		1,784,800,000
Employer benefit schemes		44,202,642			44,202,642
Non Government Organizations				6,774,000	6,774,000
Donors				966,000	966,000
					-
TOTAL	538,472,625	309,052,907	2,088,000,000	58,593,000	**2,994,118,532**

Table 8: Financing Intermediaries to End Users, 000s LL, 1998

LL 000			Government of Lebanon						
			TERRITORIAL GOVERNMENT						
			MOH	ARMY	ISF	GS	SS	MOSA	M.DISP
Hospitals									
	Government owned Hospitals								
		Recurrent Expenditures	3,595,000						
		Capital Investment	770,000						
		Construction	6,000,000						
		Salary and Wages	7,321,000						
		Household Expenditures							
		Sub-Total Government Hospitals	***17,686,000***	-	-	-	-	-	-
	NSSF owned Hospitals		***2,518,000***						
	Private Hospitals								
		Non-Surgical Care	49,661,317	24,790,776	11,441,337				
		Surgical Care	132,832,506	25,978,224	12,929,663				
		Sub-Total Private	***182,493,823***	***50,769,000***	***24,371,000***	***3,500,000***	***1,450,000***		***115,000***
		Total Hospital Expenditures	**202,697,823**	**50,769,000**	**24,371,000**	**3,500,000**	**1,450,000**	**-**	**115,000**
Nursing & Residential care facilities									
	Nursing care facilities		23,880,125						
	Residential mental Health								
	Community cares for elderly								
Non-Institutional health care providers									
	Private Physicians clinics				6,993,671	2,500,000	950,000		115,000
	NGO Clinics		24,869,602					1,213,500	
	Dentists			517,119	810,800				
	Paramedical practitioners								
	Outpatient cares centers			3,357,291					
	Medical & Diagnostic Laboratories		1,857,114		49,000				
	Home Care Services								
	Other Ambulatory		1,067,906						
Retail sale & Other providers of goods									
	Pharmaceuticals (Budget)		21,151,000	10,000,000	3,064,011				
	Pharmaceuticals (Ambulatory)			3,200,000	2,172,488				
	Sale of Optical & Hearing aids								
	Sale of Medical appliances		967,444	997,500	350,000				
	Other sale								
General Health Administration & Ins.									
	Government Administration of Health		4,961,241	3,300,000	70,000				
	Government Salaries of Health Personnel		8,279,512	13,275,000	1,828,000				
	Private Administration of Health								
Educational Institutions				120,000					
Capital Investment									
		MOH Facilities	21,187,535						
		Army Facilities		1,085,000					
		AUB							
Others									
		Diiference between NSSF revenues and expenses							
		Customs Duties Fund							
TOTAL			310,919,302	86,620,910	39,708,970	6,000,000	2,400,000	1,213,500	230,000

Table 8: Financing Intermediaries to End Users, 000s LL, 1998. (Continued)

LL 000			Government of Lebanon			NGO's
			Social Health Inst			
			CSC	NSSF	MUTUAL	
Hospitals						
	Government owned Hospitals					
		Recurrent Expenditures				
		Capital Investment				
		Construction				
		Salary and Wages				
		Household Expenditures				
		Sub-Total Government Hospitals	-	-	-	-
	NSSF owned Hospitals		39,319	561,643		
	Private Hospitals					
		Non-Surgical Care	10,080,351			
		Surgical Care	14,217,458			
		Sub-Total Private	***24,297,809***	***107,146,357***		
		Total Hospital Expenditures	**24,337,128**	**107,708,000**	-	-
Nursing & Residential care facilities						
	Nursing care facilities					
	Residential mental Health					
	Community cares for elderly					
Non-Institutional health care providers						
	Private Physicians clinics			29,601,000	16,925,115	
	NGO Clinics					6,774,000
	Dentists		2,349,854			
	Paramedical practitioners					
	Outpatient cares centers					
	Medical & Diagnostic Laboratories		16,412,696	12,558,000	8,462,558	
	Home Care Services					
	Other Ambulatory					
Retail sale & Other providers of goods						
	Pharmaceuticals (Budget)				8,462,558	
	Pharmaceuticals (Ambulatory)			47,541,000		
	Sale of Optical & Hearing aids					
	Sale of Medical appliances					
	Other sale					
General Health Administration & Ins.						
	Government Administration of Health		259,886	13,000,000		
	Government Salaries of Health Personnel		1,674,427	27,000,000		
	Private Administration of Health					
Educational Institutions						
Capital Investment			94,953			
		MOH Facilities				
		Army Facilities				
		AUB				
Others						
		Diiference between NSSF revenues and expenses		58,718,000		
		Customs Duties Fund				
TOTAL			45,128,944	296,126,000	33,850,230	6,774,000

Table 8: Financing Intermediaries to End Users, 000s LL, 1998. (Continued)

		Private / for-Profit				
		EMPLOYER BENEFIT SCHEMES	PRIVATE INSURANCE SCHEMES	HOUSEHOLD	DONORS	**Total**
						-
						-
Government owned Hospitals						-
	Recurrent Expenditures					3,595,000
	Capital Investment					770,000
	Construction					6,000,000
	Salary and Wages					7,321,000
	Household Expenditures			8,800,000		
	Sub-Total Government Hospitals	**-**	**-**	***8,800,000***		26,486,000
NSSF owned Hospitals						3,118,962
Private Hospitals						-
	Non-Surgical Care					95,973,780
	Surgical Care			237,600,000		423,557,852
	Sub-Total Private		50,081,705	237,600,000		681,824,694
	Total Hospital Expenditures	**-**	**50,081,705**	**246,400,000**		711,429,656
						-
						-
Nursing care facilities						23,880,125
Residential mental Health						-
Community cares for elderly						-
						-
ers						-
Private Physicians clinics		40,074,140	100,163,411	283,504,000		480,826,336
NGO Clinics				24,384,000		57,241,102
Dentists				456,000,000		459,677,773
Paramedical practitioners						-
Outpatient cares centers				6,192,000		9,549,291
Medical & Diagnostic Laboratories				180,800,000		220,139,368
Home Care Services						-
Other Ambulatory				27,520,000		28,587,906
						-
ods						-
Pharmaceuticals (Budget)						42,677,569
Pharmaceuticals (Ambulatory)			103,502,191	560,000,000		716,415,678
Sale of Optical & Hearing aids						-
Sale of Medical appliances						2,314,944
Other sale						-
						-
						-
s.						-
Government Administration of Health						21,591,127
Government Salaries of Health Personnel						52,056,939
Private Administration of Health		4,128,502	80,130,728			84,259,230
						-
						120,000
						-
						94,953
	MOH Facilities					21,187,535
	Army Facilities					1,085,000
	AUB				966,000	966,000
						-
	Diiference between NSSF revenues and expenses					58,718,000
	Customs Duties Fund					1,300,000
TOTAL		44,202,642	333,878,035	1,784,800,000	966,000	2,994,118,532

7.2 Expenditures by Public Financing Agents

As shown below in Table 9, expenditures on hospital care by public financing agents are very high. Overall, 62 percent of public health expenditures is spent on hospital based care, 10% on ambulatory care, 13% on pharmaceuticals, other goods accounts for 13%, 11% on administration, and 3% on capital investment. All of the GS and SS expenditures are for hospital based services. In the case of the Ministry of Health 71% of its budget is used to pay for hospital based care. Expenditures on primary health care services are a sub-set of that on non-institutional health care providers and accounts for less than 5% of public expenditures. The Ministry of Health has not been able to disburse all amounts allotted to primary health care and in some cases these resources have been diverted to curative care services.

Table 9: Distribution of Public Expenditures (Percent)

Category	MOH	ARMY	ISF	GS	SS	CSC	NSSF	Total
Hospitals	71%	59%	74%	100%	100%	54%	52%	62%
Non-Institutional health care providers	10%	4%	3%	0%	0%	42%	6%	10%
Retail sale & Other providers of goods	8%	16%	17%	0%	0%	0%	23%	13%
Administrative Costs	5%	19%	6%	0%	0%	4%	19%	11%
Capital Investment	7%	1%	0%	0%	0%	0%	0%	3%
Total	100%	100%	100%	100%	100%	100%	100%	100%

Source: NHA spreadsheets

7.3 Hospital Sector

As noted in Table 10, there are a total of 167 hospitals with 11,533 beds in Lebanon. Twelve percent of the hospitals and ten percent of the beds are in the public sector. The predominance of the private sector reflects the results of a financing arrangement where the public sector purchases services from the private sector, lack of coordination on provider payment and rates amongst public sector payers, and the significant investments made by the private sector in the hospital sector. The private hospital association is a powerful lobby and controlling hospital expenditures has been a policy concern for some years.

Table 10: Distribution of Hospitals and Beds by Sector

Governorates	Public Hospitals		Private Hospitals		Total	
	Number Hospitals	Number Beds	Number Hospitals	Number Beds	Number Hospitals	Number Beds
Beirut	1	14	23	2187	24	2201
Mount Lebanon	4	253	54	3728	58	2981
North Lebanon	4	272	23	1652	27	1929
South	6	311	18	1348	24	1659
Nabatieh	1	76	4	161	5	237
Bekaa	4	220	24	1311	28	1531
Total	20	1146	147	10387	167	11533

Source: MOH Statistics

Table 11 shows that Lebanon has 2.88 beds per 1000 population making this one of the highest ratios in the Middle East. However, the beds are not uniformly distributed. As example, Mount Lebanon has 6.55 beds per 1000 population and Nabatieh has only 0.86 beds per 1000 population.

Table 11: Beds per Thousand Population

Governorate	Resident Population	Beds/1000 Population
Beirut	1,303,169	1.69
Mount Lebanon	607,767	6.55
North Lebanon	807,204	2.38
South	472,105	3.51
Nabatieh	275,372	0.86
Bekaa	539,448	2.84
Lebanon	4,005,065	2.88

Source: NHA Matrices

Table 12 shows that 67% of the hospitals in Lebanon have seventy beds or less, 30% have between seventy-one and two hundred beds, and only 3% have more than two hundred beds. All of the hospitals with over two hundred beds are in the private sector. The high percentage of hospitals with fewer than seventy beds and the fact that they tend to be multi-specialty facilities means that it is difficult to achieve economies of scale leading to inefficiencies. Quality of care and financial viability in these facilities also remains a concern.

Table 12: Distribution of Hospitals by Number of Beds

Number of Beds	Number of Public Hospitals	Number of Private Hospitals	Total Hospitals
Up to 70 beds	14	98	112
71 to 200 beds	6	45	51
Over 200 beds	0	4	4

Source: NHA matrices

7.4 Analysis of a Sample of Hospital Bills Paid by Public Providers

For the first time, as part of the National Health Accounts activity, a sample of hospital bills paid by government agencies was analyzed to better understand their breakdown. Table 13 shows that 73% of the amount Ministry of Health's reimbursements for hospital care was on surgical care and the remaining 23% were for non-surgical care. The CSC spent 59% of its hospital reimbursements for surgical care, the ISF 53%, the Army 51%, and the NSSF 60%. This distribution probably reflects the fact that the Ministry of Health is the insurer of last resort and hence tends to pay more for inpatient admissions. With regard to the other agencies hospitalization costs are part of the benefits available to their beneficiaries.

Table 13: Distribution of Hospital Expenditures (Percent)

Agency	Non- Surgical Costs	Surgical Costs
Ministry of Health	27%	73%
ISF	47%	53%
Army	49%	51%
NSSF	40%	60%
CSC	41%	59%

Source: NHA Spreadsheets

Table 14 shows the distribution of costs associated with hospitalization by category of service. An interesting finding is that diagnostic tests accounted for 19.4% of the costs and drugs and medical supplies for 25.1% of costs. Surgery costs were 15.0% of total costs, Operation Theater accounted for 11.0% of costs, and room and board was 15.9% of costs. Doctor fees were only 8.0% of the costs. These findings would appear to support the

perception that hospitals tend to perform large number of investigations and prescribe a number of drugs for each episode of hospitalization as a means of optimizing their revenues. The findings from the analysis of the sample of hospital bills will be very relevant to the discussion on hospital reimbursements and reforming health care financing.

Table 14: Distribution of Hospital Reimbursements by Type of Service

Category	Surgery	Doctor Fees	Anesthesia	Room and Board
Ministry of Health	16.7%	8.6%	4.8%	15.6%
ISF	10.2%	14.4%	2.5%	13.6%
Army	11.7%	9.4%	3.1%	18.4%
NSSF	13.1%	11.1%	4.8%	17.0%
CSC	16.1%	11.4%	4.9%	12.8%
Weighted Avg.	15.0%	8.0%	4.2%	15.9%

Table 14: Distribution of Hospital Reimbursements by Type of Service

Category	Operation Room	Lab Tests	Radiology	MRI
Ministry of Health	12.6%	12.2%	7.1%	0.5%
ISF	9.6%	12.3%	4.7%	0.8%
Army	8.4%	13.2%	7.3%	0.8%
NSSF	18.2%	10.5%	6.9%	0.9%
CSC	10.3%	9.2%	4.6%	0.2%
Weighted Avg.	11.0%	11.0%	6.0%	0.6%

Table 14: Distribution of Hospital Reimbursements by Type of Service

Category	CT Scan	Drugs	MS	Other
Ministry of Health	2.4%	15.7%	2.8%	1.1%
ISF	1.8%	19.1%	9.0%	2.1%

Army	1.9%	14.6%	6.2%	5.1%
NSSF	0%	12.0%	4.7%	0.7%
CSC	1.0%	19.3%	3.7%	6.4%
Weighted Avg.	1.8%	19.1%	6.0%	2.1%

7.5 The Ministry of Health

In Lebanon the Ministry of Health is the insurer of last resort. The Ministry of Health funds the hospitalization costs for any citizen who is not covered under an insurance plan (social or private). This coverage is independent of the income and asset status of the individual. In addition the Ministry of Health also covers the cost of some narrow specialties such as chemotherapy, open heart surgery, dialysis and renal transplant, and drugs for chronic diseases. Even as the responsibility of the Ministry of Health has grown its share of the Government of Lebanon's budget has declined from over 5% in the early 1990s to around 3% in 1998 (Table 15).

Table 15: Ministry of Health Budget as Percentage of Government Budget (Including Public Debt Services)

Year	Percent
1992	4.56%
1993	5.17%
1994	5.27%
1995	4.09%
1996	3.03%
1997	2.48%
1998	3.19%

Source: MOH Budget

Table 16 shows the percentage of the Ministry of Health's budget that goes to pay for special programs. It has ranged from a low of 72% in 1995 to a high of 84% in 1993. Quite clearly, many of these programs such as open heart surgery, kidney dialysis, kidney transplantation, and treatment of burns affects very few persons and yet consumes about 20% of the Ministry of Health's budget. One possible explanation for the reduction in the share of hospital expenditures between 1997 and 1998 might be the decision of the Ministry of Health to pay for same day surgery. This needs further investigation. The amount spent on open-heart

surgeries declined in 1998. This is attributed to the change in reimbursement method for these procedures that now pays on a capitated basis.

Table 16: Distribution of MOH Expenditures on Private Curative Care, 1993-1998

	1993	**1994**	**1995**	**1996**	**1997**	**1998**
Special Programs						
Hospitalization	61%	61%	68%	70%	71%	66%
Same Day Surgery	0%	0%	0%	0%	0%	3%
Nursing Care Facilities	13%	11%	9%	10%	10%	11%
Open Heart	13%	15%	12%	10%	10%	8%
Kidney Dialysis	10%	9%	8%	8%	7%	8%
Chemotherapy	1%	1%	0%	0%	1%	0%
Physiotherapy	0%	0%	0%	0%	0%	0%
Prothesis	0%	0%	0%	0%	0%	0%
Kidney Transplantation	1%	1%	0%	1%	0%	0%
Burns	0%	1%	1%	1%	0%	1%
Lab Rad & CTS –MRI	2%	1%	2%	2%	2%	1%
Total	100%	100%	100%	100%	100%	100%
Share of MOH Expenses	84%	76%	72%	77%	78%	75%

Source: MOH Budget

Table 17 shows that the Ministry of Health that ran surpluses between 1993 and 1995 has been incurring deficits in each of the subsequent years. The surplus in the early 1990s was partly a reflection of the fact that the Ministry of Health did not have the capacity to fully utilize its budget. From 1996 onwards the deficit incurred by the Ministry of Health was due to its increasing commitments to special programs, a growing awareness among the people that the Ministry paid for hospitalization costs, and its inability to curb hospital costs. The deficit was worst in 1997 when it was equal to nearly 60% of the budget. The Ministry of Health has responded to these deficits by delaying reimbursing hospitals for their services and making deductions in the reimbursements. On the one hand hospitals complain that they are not getting reimbursed for services and on the other the Ministry feels that hospitals tend to over prescribe services.

Table 17: Ministry of Health Budget and Expenditures 1993-1998

Year	Budget	Expenditures	Surplus/Deficit
1993	160,604,944,000	101,684,373,000	58,920,571,000
1994	194,907,794,000	140,069,449,000	54,838,345,000
1995	196,897,619,000	182,424,981,000	14,472,638,000
1996	168,814,490,000	211,080,714,000	(42,266,224,000)
1997	156,570,000,000	251,479,412,000	(94,909,412,000)
1998	252,943,587,000	278,444,088,000	(25,500,501,000)

7.6 Private Insurance Market

The private insurance market is growing rapidly in Lebanon. According to the Ministry of Economy sources approximately 70 private insurance companies provide health insurance. They provide both complementary and comprehensive health insurance policies. The former is to complement and fill gaps in the benefits provided by NSSF, CSC, and health insurance arrangements for the Army and Police. The latter refer to stand alone health insurance policies that can cover a range of benefits including inpatient and outpatient care, and coverage for pharmaceutical expenses. It is estimated that 8% of the population has comprehensive coverage and 4.6% gap insurance. One report places the percent of population covered by private insurance at 16.6%.

Private insurance companies consider their data (on the number of the insured, premiums collected, expenditures, loss ratio) highly confidential. As part of the NHA study various efforts were made to collect more accurate information on the private insurane sector through two ways. First was an attempt to collect data through cooperation with the Medical Committee of ACAL (Association of Lebanese Insurers). Mednet ws contacted for information. MedNet is the only HMO (Health Management Organization) and PPO (Preferred Provider Organization) in Lebanon. MedNet attempts to lower costs by establishing networks of providers that are paid according to negotiated fee schedules. In addition we approached the Ministry of Eeconomy (that licences and controls insurance companies)

According to the ACAL aggregate figures released for 1998 Health Insurance continued to dominate the sector, representing some 48% of total premiums written. The top 20 firms control about 70% of the market. In May of 1999, Parliament passed an insurance reform law that is expected to pave the way for the consolidation of the sector.

Table 18: Insurance Premiums 1997-1998

Type of Coverage	Total Premium 1998 ($ million)	Total Premium 1997 ($ million)	Increase %
Hospitalization	215	198	8.58
Life	75	80	6.26
Motor	25	64	11.15
General Accidents	41	27	51.24
Fire	34	19	85.86
Workmen's Compensation	16	18	13.88
Marine	12	15	17.14
TOTAL	450	421	7.05

Source: NHA Matrices

Compared to other countries in the region, Lebanon has a fairly well developed private insurance sector. Private insurance is licensed by the Ministry of Economy. Insurance companies are required by law to set aside 40% of premiums as reserves.

Of the 70 health insurance companies in Lebanon, 17 are associated with MedNet which in turn reinsures its book of business with MunichRe. MedNet is one of the Third Party Administrators in Lebanon. Ten of the companies are foreign owned and preliminary reports indicate that another ten are non-operational. The two global reinusrance companies with offices in Lebanon are MunichRe and SwissRe.

Nearly 85% of the policies are purchased by employers as an employee benefit or to fill gaps in NSSF coverage. The growing Private Mutuelle sector is in competition with the private insruance market. Private Insurance companies have a legitimate concern that preferential tax treatment provide mutuelles with an undue advantage. Insurance policies in Lebanon typically cover in-patient care. Outpatient services are covered for an additional premiums with co-payments of around 20%.

There is anecdotal evidence that private insurance companies transfer the burden of high cost cases to the Ministry of Health as the latter does not have the ability to verify whether application have insurance or not.

Table 19 shows an estimate of the breakdown of expenditures by private insurance companies by type of service. Phycians fees account for 30% of expenses, pharmaceuticals for 31%, hospitalization costs for 15%, and administrative expenses for 24%. Many insurance companies still consider health to be a loss leader.

Table 19: Distribution of Private Insurance Expenditures

Item	Percentage
Physician Fees	30%
Pharmaceuticals	31%
Hospitalization Costs	15%
Administrative Expenses	24%
Total	100%

Source: NHA matrices

Estimating Premiums for Private Insurance

Insurance companies are extremely reluctant to share information on premiums, claim payments, loss ratios, and profits. Different approaches were taken under the NHA activity to obtain this information. These included directly contacting private insurance companies, contacting the Ministry of Economy (that controls insurance companies), hiring consultants to conduct studies of the private insurance market. None of these efforts were successful in obtaining information from the private insurance companies. Given the rapidly increasing share of this sector and the potential impact insurance can have on utilization and costs there is a need for greater transparency in this sector.

Two methods were used to estimate premiums. The first used a bottom-up approach and the other a more top down methodology. Both these are described here.

Approach I: The bottom-up approach was used by Dr. Ammar and involved the following steps.

- Average gross premiums for stand alone policies as well as those supplementing NSSF coverage was obtained from Mednet Liban for In-Hospital, Out-of-Hospital, and both in-hospital and out-of-hospital policies

- Also from Mednet Liban was obtained information on the proportionate distribution of policy holders by those who had only hospital coverage and those who had both hospital and out-patient coverage

- Data from the household survey on insurance coverage was used with information on the population size to estimate the total number of policies to estimate the number of stand alone and supplementary insurance policies

- The information on premiums and proportionate distribution of adherents was then combined with the data on the total number of policies to estimate total premiums in the market

Table 20 provides the results of this analysis and gives us an estimate of 361,105,525,997 LL. It should be noted that under this approach health benefits paid for by employers (even if they are paid directly) are part of these estimates.

Table 20: Estimate of the Private Insurance Premiums (Approach I)

	Stand Alone	Supplements NSSF	Total
In Only	130,910,697,242	22,467,241,912	153,377,939,154
In and Out	201,931,111,279	5,796,475,564	207,727,586,843
Total	332,841,808,521	28,263,717,476	361,105,525,997

Approach II: The top down approach

Under this approach the following steps were undertaken

- Data from the household survey on insurance premiums was used to estimate that the total household contributions for insurance premiums. This amounted to 303,200,000,000 LL

- We had fairly reliable estimates that household premium contributions to NSSF and Mutuelles amounted to 43,358,000,000 LL and 17,380,230,000 LL respectively. This meant that household contributions for private insurance premiums amounted to 242,461,770,000 LL.

- To this was added the contribution of employers for private insurance of 91,416,265,000 LL. This gives estimated premiums in 1998 of 333,878,035,000 LL.

Under this approach we do not include the 44 billion Lebanese Pounds that large firms paid directly for employee health benefits (see the Large Firms section for more details). Both the approaches yield similar results leading to some confidence in these esitmates.

Expenditures on private insurance as a percentage of GDP in Lebanon is higher than other countries in the region such as Kuwait and Egypt. The insurance market is highly fragmented with 9% of companies reporting premium income between USD 5-50 million, 49% have premiums between USD 1-4 million, and others had premiums of less than USD 1 million.

7.7 The Pharmaceutical Sector

The pharmaceutical sector in Lebanon constitutes a big part of the health services bill. In 1998, pharmaceutical expenditures accounted for over 25% of total health expenditures. As a percentage of health expenditures, Lebanon's expenditures on pharmaceuticals is less than those of other countries that are part of the regional initiative but higher than the OECD average. As with the case of the private insurance market considerable uncertainly exists about the size and composition of the pharmaceutical market in Lebanon.

Ninety-eight percent of the pharmaceuticals sold in Lebanon are trade names with generics accounting for only 2%. Imported drugs account for 94% of consumption with locally manufactured drugs making up only 6% (some studies and estimates put this as high as 14%). Thus, Lebanon has not only high per capita expenditures on pharmaceuticals (USD 120) but almost all of the drugs are trade name products that are imported into the country. Expenditures on pharmaceuticals have been increasing at 7% per annum a figure that is higher than the rate of inflation. Household out-of-pocket expenditures account for 94% of the spending on pharmaceuticals.

A 1996 study showed that 5521 pharmaceutical items manufactured by 489 companies were sold through 106 importers in Lebanon. Another report in 1997 (Dr. Suakrieh in Al-Khaleej newspaper) stated that Lebanon imported 5968 pharmaceutical products from 25 countries. Of these only 2087 were drugs on WHO's list. The IMS Health Data indicates that Lebanon has some 320 agents representing 288 pharmaceutical companies. The French company Aventis had the highest share in the market for 1998 with 10.4% followed by the UK based company Smith Kline Beecham with 8.2%. The Swedish company Novartis comes third with 6.5%. Main local producers are Mediphar, Pharmaline, Mephico and Algorithem. Further,

IMS estimates that there is a load factor of nearly 69% on the manufacture price. Their estimates of specific load factors are presented below.

Pharmaceuticals price structuring in Lebanon can be described in the following example:

Ex. Manufacture price	USD100
+ Freight 7.5%	=USD 107.5
+ Clearance 10%	=USD 118.25 (Price to Agent)
+ Agent Margin 10%	=USD 130.08 (Pharmacy Purchase Price)
+ Pharmacist Margin 30%	=USD 169.10 (Public Purchase Price)

The growth in expenditures on pharmaceuticals has been accompanied by a rapid increase in the number of pharmacies in Lebanon. Table 21 shows that between 1995 and 1998 the number of pharmacies in Lebanon rose by 59% and the number of registered pharmacists grew by 34%. In North Lebanon the number of pharmacies nearly doubled, in Bekaa the increase was 73%, in Mount Lebanon 55%, and even in Beirut there was an increase of 28%.

Table 21: Growth in the Number of Pharmacies by Governorate, 1994-1998

Governorate	1995	1996	1997	1998	1999	Increase 1995- 1999	Percent Increase
Beirut	146	158	179	184	187	41	28%
Mount Lebanon	405	464	573	595	627	222	55%
North Lebanon	135	156	174	241	260	125	93%
South Lebanon	82	93	106	118	137	55	67%
Nabatieh	36	42	46	52	57	21	58%
Bekaa	79	95	105	125	137	58	73%
Total	883	1008	1183	1315	1405	522	59%
Number of Registered Pharmacists	2341	2577	2772	2979	3146	805	34%

Source: NHA matrices

Table 22 shows that 69% of the registered pharmacists in Lebanon are self-employed with only 31% working for other institutions.

Table 22: Distribution of Pharmacists by Employment Status

Employment of Pharmacists	
	Number

Schools/Universities	28
Hospital Pharmacies	120
Pharmacies	117
Private Laboratories	5
Hosptial Laboratories	24
Pharmaceutical Stores	196
Pharmaceutical Plants	36
Scientific Offices	127
Public Sector	33
Others	18
Employed Groups	**704**
Owners of Pharmaceutical Plants	2
Owners of Private Laboratories	41
Owners of Pharmacies	1405
Owners of Pharmaceutical Stores	100
Owners' Group	**1548**
Total	2252

Source: Order of Pharmacisits 2000, Dr. Kronfol

Table 23 shows the consumption of pharmaceuticals by therapeutic class. Antibiotics account for 18% followed by anti-inflammatory at 14%, and cardiology-hypertension at 9%. Vitamins account for 6% of all drugs. A rather surprising finding is that Steroids account for 5% and anatacids for 4%

Table 23: Consumption of Pharmaceuticals by Therapeutic Class

Therapeutic Class	
Antibiotics	18%
Anti-inflammatory	14%
Cardiology-hypertension	9%
Vitamins/Minerals	6%
Steroids	5%
Antacids	4%
Ophthalmic	3%
Others	41%

Source: IMS Data Set
Pharmaceutical Task Force (Dr. Kronfol)

Estimating the Size of the Pharmaceutical Sector

In order to better estimate the size of the pharmaceutical market we analyzed the IMS Health Data. IMS Health is an international company that specializes in studying the pharmaecutical industry and its marketing. The IMS Health data is useful in estimating actual consumption

in the private sector (as opposed to total imports). The IMS data is updated quarterly based on surveying a sample of 65 pharmacies and 4 wholesalers out of 1257 pharmacies in Lebanon. The selection method is at random out of an address register arranged according to stratification criteria with a reporting time being all days of a quarter. All pharmacy data are projected to national level by using 8 regional projection factors. These factors change every quarter according to the degree of panel collaboration. Distributor data are added unprojected.

In addtion to the analysis of the data provided by IMS we also examined other studies of the pharmaceutical sector including those conducted by the task force on Pharmaceuticals of the World Bank Project. As part of the NHA activity we obtained information on pharmaceutical expenditures from all public entities. The household survey provided information on out-of-pocket expenditures on pharmaceuticals. Table 24 presents the various estimates. We observe that estimates of the size of the market range from a low of 441,965,000,000 LL to a high of 759,053,247,000 LL. A number of reasons might account for this difference. First, the size of the pharmacuetical market in Lebanon might have been underestimated by previous studies. Second, households might be over reporting the amount they spend on drugs as well as including items such as food supplements that other studies exclude. Even if this were to be the case the differences are far too large to be explained away. Two other reasons might also account for these differences. One is that there might be a parallel import of drugs into the country. This could be in the form of donations received by NGOs that might bypass normal channels. Finally, there might be some double billing taking place. It is probably a combination of the various factors mentioned above that explains the differences between the estimates. However, it is clear that at 25 percent to total health expenditures pharmaceutical expenditures are a major area of the health sector that needs to be better managed and regulated if health care costs are to be held in check.

Table 24: Estimates of the Size of the Pharmaceutical Market

Source of Information	Amount (‘000 LL)
IMS Health Data*	441,965,000
Pharmaceutical Task Force**	508,685,490
National Health Accounts	
Public Expenditures	42,677,569
Private Expenditures	716,415,678
Total Expenditures	759,053,247

Notes:

* This represents sales in at pharmacies but has been adjusted to reflect load factors

** This represents the total market and has a 7% annual increase built in from 1997 numbers

The rapid growth in the pharmaceutical sector, the near complete reliance on brand name drugs, and imports to meet demand make rationalizing expenditures on pharmaceuticals a key area for policy intervention.

7.8 Donor Assistance

In 1998, donor assistance amounted to 1.96% of total health care financing. While this is a small percentage of total health expenditures the trends in donor assistance need attention. Table 24 shows that donor assistance that doubled between 1995 and 1996 actually declined by nearly 30% between 1996 and 1997 and rose by less than 5% between 1997 and 1998. The sharpest decline in donor assistance has been to immunization and control of diseases and there has been a significant increase in support for family planning activities. Outlays for capital investment account for the majority of donor assistance. These rose by 174% between 1995 and 1996, declined by 23% between 1996 and 1997, and rose by 13% between 1997 and 1998. The Ministry of Health and other government agencies are the primary beneficiary of donor assistance. The American University in Beirut and Non-Governmental Providers received less than 5% of donor disbursements. With donor assistance it was difficult to reconcile the amount disbursed with the amount actually spent.

Table 24: Summary of External Assistance Disbursements to Health Sector (000s LL)

Area	1995	1996	1997	1998
Sector Policy and Planning	1,116,000	1,636,500	1,828,500	828,000
Primary Health Care	11,775,000	11,112,000	6,688,500	4,701,000
Immunization and control of diseases	820,500	5,191,500	589,500	111,000
Family Planning	985,500	1,057,500	619,500	1,137,000
Hospitals and Health Centers	19,632,000	53,755,500	41,491,500	46,867,500
Total	34,330,995	72,754,996	51,219,497	53,646,498
Percentage Change in External Assistance				
Area	1995	1996	1997	1998
Sector Policy and Planning		46.6%	11.7%	-54.7%
Primary Health Care		-5.6%	-39.8%	-29.7%
Immunization and control of diseases		532.7%	-88.6%	-81.2%
Family Planning		7.3%	-41.4%	83.5%
Hospitals and Clinics		173.8%	-22.8%	13.0%
Total		111.9%	-29.6%	4.7%

Source: UNDP Annual Report and Information from CDR

The World Bank has been supporting health sector reform as well as capital investment activities in Lebanon. Table 25 shows that the World Bank's loan portfolio was USD 38 million. Of this disbursements in 1998 amounted to USD 2.34 million and cumulative disbursements until the end of March 31, 1999 was USD 3.91 million.

Table 25: World Bank Loan Portfolio for Health Sector

Total Amount ('000s US$)	38,000
Cumulative Disbursement as of March 31, 1999	3,910
Disbursement in 1998	2,340
Total Amount ('000s LL)	57,000,000
Cumulative Disbursement as of March 31, 1999	5,865,000
Disbursement in 1998	3,510,000

Source: UNDP Annual Report

7.9 Big Firms

In order to complete the matrices and sections of the NHA relating to the participation of the private sector in the health care expenditure, a number of surveys have been carried out. One of these is that of Big Firms. This survey intended to show the amount of expenditure employers spend on the health care of their employees for services other than that under the private health insurance and/ or NSSF for the years 1998 and 1999. Most of these employers are banks, large manufacturers in addition to MEA and others. The majority of these health expenditures represent reimbursements for services in private clinics.

To complete this survey a random sample of companies falling under the category of "Big Firms" as classified by the Beirut Chamber of Commerce was chosen. The sample size is 88 companies out of 600 making a representative sample of 15%.

Total results show that 78% of companies have private insurance for their employees, which is complementary to the NSSF in 75% of the cases. 20% of these companies provide extra other health services that may not be covered by NSSF or the private health insurance.

Further, 22% of the companies do not provide private health insurance. Half of these provide NSSF coverage. In total, survey results show that employers have paid around 40 billion

Lebanese pounds for other health services in 1998. This amount increased to 42.5 billion in 1999. Administrative expenses for providing these extra benefits by employers has been around 1.88 billion in 1998 and 2 billion in 1999.

Salaries paid for company doctors by these big firms amounted to 2.25 billion in 1998 and 2.6 billion in 1999. So in all it seems that employers have spent around 44 billion Lebanese pounds over health care of their employees in 1998 and 47 billion in 1999.

Table 26a: Employers spending on health care other than Private Insurance and /or NSSF

Companies Providing	Companies Providing	Companies Providing	Companies		Other Services Expenditure	
Private Insurance	**NSSF**	**Other Services**	**#**	**%**	**98**	**99**
No	Yes	No	67	11%	-	-
		Yes	60	10%	27,375,902,993	28,541,553,760
	Yes Total		127	22%	27,375,902,993	28,541,553,760
No Total			127	22%	27,375,902,993	28,541,553,760
Yes	No	No	20	3%	-	-
	No Total		20	3%	-	-
	Yes	No	320	55%	-	-
		Yes	120	20%	12,698,236,860	13,915,137,447
	Yes Total		440	75%	12,698,236,860	13,915,137,447
Yes Total			460	78%	12,698,236,860	13,915,137,447
Grand Total			587	100%	40,074,139,853	42,456,691,207

Table 26b: Employer Administrative and Salary Spending on Health (Other than Private Insurance and NSSF)

Campaniles Providing	Companies Providing	Companies Providing	Companies		Administrative Expenses	
Private Insurance	**NSSF**	**Other Services**	**#**	**%**	**98**	**99**
No	Yes	No	67	11%	-	-
		Yes	60	10%	1,470,820,173	1,438,469,400
	Yes Total		127	22%	1,470,820,173	1,438,469,400
No Total			127	22%	1,470,820,173	1,438,469,400
Yes	No	No	20	3%	115,580,947	182,282,940
	No Total		20	3%	115,580,947	182,282,940
	Yes	No	320	55%	276,666,667	403,000,000
		Yes	120	20%	17,820,553	20,352,413
	Yes Total		440	75%	294,487,220	423,352,413

Yes Total	460	78%	410,068,167	605,635,353
Grand Total	587	100%	1,880,888,340	2,044,104,753

Table 26c: Employer Administrative and Salary Spending on Health (Other than Private Insurance and NSSF)

Campaniles Providing	Companies Providing	Companies Providing	Companies		Company Doctors Salaries	
Private Insurance	**NSSF**	**Other Services**	**#**	**%**	**98**	**99**
No	Yes	No	67	11%	-	3,000,000
		Yes	60	10%	399,360,000	494,953,333
	Yes Total		127	22%	399,360,000	497,953,333
No Total			127	22%	399,360,000	497,953,333
Yes	No	No	20	3%	54,000,000	60,000,000
	No Total		20	3%	54,000,000	60,000,000
	Yes	No	320	55%	613,066,667	901,620,000
		Yes	120	20%	1,181,187,087	1,132,212,493
	Yes Total		440	75%	1,794,253,753	2,033,832,493
Yes Total			460	78%	1,848,253,753	2,093,832,493
Grand Total			587	100%	2,247,613,753	2,591,785,827

7.10 Households

A National Household Health Expenditure and Utilization Survey (NHHEUS) has recently been completed. This represents the first time a health specific survey has been conducted in Lebanon. A nationally representative sample of roughly 6,500 households was used. The survey addressed the following main questions:

1. Health Care Use and its determinants
2. Choice of Provider by type of service and its determinants
3. Out-of-pocket expenditures by type of provider and service
4. Insurance Status of population including multiple coverage
5. Gender Equity in health care use
6. The health status and health care use of the elderly

A detailed report presenting the main findings from the household survey will be published shortly. For the purposes of the NHA report we will be using a few select figures on utilization and expenditures.

From the matrix on sources to financing intermediaries we observe that household out-of-pocket expenditures amounted to 69.74% of total health expenditures. This is significantly higher than previous estimates that had place out-of-pocket expenditures at around 53% of total health expenditures. This steep increase in household expenditures has important policy implications.

Health Care Utilization

Table 27 presents preliminary results from the NHHEUS on annual per capita use rates for Outpatient Care. On average Lebanese used 3.6 outpatient visits per year, with males using 3.1 visits per capita per year and females 4.1 visists per year. While regional disparities exist in use rates these do not appear to be significant. This probably reflects the presence of a well developed market for health services (in the private, NGO, and public sectors). An intersting finding is that unlike many other counties lower income individuals have higher use rates than those in higher income groups. Jordan is the other country in the region where similar results have been observed. This indicates that there does not appear to be inequities in access to health services if these are measured by use rates. However, as we will see later there might be inequities in the burden of out-of-pocket payments. Looking at use rates by age group it is seen that those over the age of sixty and those less than the age of five have the highest use rates. Other than those below the age of five use rates for females tends to be higher than males. Those who have insurance have higher use rates than the uninsured.

Table 27: Annual Per Capita Use Rates for Outpatient Care

	Males	Females	Total
All Lebanon	3.1	4.1	3.6
Place of Residence			
Beirut	3.1	4.4	3.8
Beirut Suburbs	3.3	4.2	3.8
Mount of Lebanon	3.7	4.5	4.1
North of Lebanon	2.9	3.8	3.3
South of Lebanon	3.3	4.5	4.0
Nabatyeh	2.5	3.3	2.9
Bekaa	2.7	3.3	3.0
Age			
Less than 5	6.7	5.9	6.3
05-14	2.9	2.8	2.9
15-59	2.7	4.1	3.4
60 and Older	5.4	7.0	6.2
Household Income (‘000 LL)			

Less than 300	3.8	5.8	4.9
300 to 500	3.6	4.4	4.0
500 to 800	3.5	4.3	3.9
800 to 1200	3.5	4.2	3.9
1200 to 1600	3.1	4.2	3.6
1600 to 2400	3.1	4.3	3.7
2400 to 3200	3.0	3.8	3.4
3200 to 5000	3.3	3.7	3.5
5000 and above	2.6	4.1	3.4
Insurance Status			
Insured			4.1
Not Insured			3.8

Note: Some of the numbers are unweighted
Use by insurance status and gender is yet to be computed in survey

Table 28 shows the annual per capita use rates for hospitalizations. Once again one does not see inequities in use rates though those with insurance do tend to have a higher use of hospital services than those that are unisured. The age differences persist as in the case of outpatient care. The fact that lower income households have higher use rates than those with higher incomes quite likely relflects the fact that the government as the insurer of the last resort pays for hospital care for all uninsured in Lebanon. Thus those needing hospital care can either use insurance (social or private) or approach the Ministry of Health for finances.

Table 28: Annual Per Capita Use Rates for Hospitalization

	Males	Females	Total
All Lebanon	0.11	0.13	0.12
Place of Residence			
Beirut	0.09	0.09	0.10
Beirut Suburbs	0.10	0.13	0.10
Mount of Lebanon	0.10	0.12	0.10
North of Lebanon	0.10	0.12	0.10
South of Lebanon	0.12	0.16	0.10
Nabatyeh	0.10	0.13	0.10
Bekaa	0.16	0.19	0.19
Age			
Less than 5	0.14	0.09	0.12
05-14	0.06	0.04	0.05
15-59	0.09	0.14	0.12
60 and Older	0.29	0.28	0.28
Household Income (‘000 LL)			
Less than 300	0.18	0.18	0.18
300 to 500	0.13	0.15	0.14
500 to 800	0.10	0.14	0.12

800 to 1200	0.12	0.12	0.12
1200 to 1600	0.10	0.11	0.10
1600 to 2400	0.09	0.13	0.11
2400 to 3200	0.09	0.15	0.12
3200 to 5000	0.09	0.11	0.10
5000 and above	0.10	0.16	0.13
Insurance Status			
Insured			0.14
Not Insured			0.11

Note: Use by insurance status and gender is yet to be computed in survey

Table 29 presents preliminary results from the NHHEUS on the use of Day Surgery. While the elderly have higher use rates than other age groups one does not observe the differences by insurance status as was seen in the case of outpatient care and hospitalization. This is likely because most insurance policies do not cover day surgery.

Table 29: Annual Per Capita Use Rates for Day Surgery

	Males	Females	Total
All Lebanon	0.04	.05	.05
Place of Residence			
Beirut	0.05	0.05	0.05
Beirut Suburbs	0.03	0.03	0.03
Mount of Lebanon	0.06	0.07	0.06
North of Lebanon	0.03	0.04	0.03
South of Lebanon	0.06	0.08	0.07
Nabatyeh	0.08	0.08	0.08
Bekaa	0.04	0.06	0.05
Age			
Less than 5	0.02	0.03	0.02
05-14	0.02	0.02	0.02
15-59	0.06	0.05	0.05
60 and Older	0.09	0.08	0.09
Household Income (‘000 LL)			
Less than 300	0.05	0.06	0.06
300 to 500	0.04	0.06	0.05
500 to 800	0.04	0.05	0.05
800 to 1200	0.05	0.06	0.05
1200 to 1600	0.04	0.06	0.05
1600 to 2400	0.04	0.04	0.04
2400 to 3200	0.05	0.04	0.04
3200 to 5000	0.04	0.07	0.05
5000 and above	0.06	0.05	0.05
Insurance Status			
Insured			0.05
Not Insured			0.05

Note: Some of these numbers might be unweighted

Use by insurance status and gender is yet to be computed in survey

Table 30 shows the annual number of episodes of dental treatment per person. An interesting observation is that the highest use rates are to be found in the Mount of Lebanon. As dental care is not covered under most insurance policies this probably reflects the fact that the largest number of dentists are to be found in the Mount of Lebanon area. Contrary to the trend with regard to other services the elderly use far less dental care than those in the age group fifteen to fifty-nine. Similary, those in the lower income groups use less dental care than those in the higher income groups. While some of this might be a function of greater awareness the findings for income and age likely likely indicate a lack of access (due to the inability to pay).

Table 30: Annual Per Capita Episodes of Dental Care

	Males	Females	Total
All Lebanon	0.70	0.70	0.70
Place of Residence			
Beirut	0.50	0.60	0.60
Beirut Suburbs	0.60	0.80	0.70
Mount of Lebanon	1.00	1.00	1.00
North of Lebanon	0.60	0.60	0.60
South of Lebanon	0.50	0.60	0.60
Nabatyeh	0.70	0.70	0.70
Bekaa	0.80	0.80	0.80
Age			
Less than 5	0.00	0.10	0.10
05-14	0.50	0.50	0.50
15-59	0.90	0.90	0.90
60 and Older	0.50	0.50	0.50
Household Income (‘000 LL)			
Less than 300	0.50	0.50	0.50
300 to 500	0.60	0.60	0.60
500 to 800	0.60	0.60	0.60
800 to 1200	0.70	0.70	0.70
1200 to 1600	0.70	0.80	0.80
1600 to 2400	0.80	0.90	0.90
2400 to 3200	0.70	0.80	0.80
3200 to 5000	0.90	1.10	1.00
5000 and above	0.80	0.70	0.80
Insurance Status			
Insured			0.74
Not Insured			0.67

Note: Use by insurance status and gender is yet to be computed in survey

Choice of Provider by Type of Service

Table 31 reflects the fact that the private sector dominates the market in Lebanon. For outpatient care the private sector is followed by the NGO sector with the Public sector accounting for only 9% of all visits. With regard to hospitalizations the private sector once again accounts for nearly 86% of all admissions with the Public sector accounting for 9%. Some questions have been raised about the rather large share for NGO hospitals and this will be examined in greater details when the final analysis of the NHHEUS data is conducted. The Public Sector fares a little better when it comes to one day surgery probably because it both pays for this as well provides these services at its facilities. Dental care is almost exclusively the domain of the private sector. This predominance of the private sector in Lebanon makes it clear that any attempt at containing costs and improving efficiency will require the participation and buy-in of the private sector. At the same time unless this sector is better managed meaningful changes to the health system cannot be achieved.

Table 31: Choice of Provider

Type of Care	Public	Private	NGOs
Outpatient Visits	9.4%	78.4%	12.2%
Hospitalizations	8.7%	85.7%	5.6%
One day Surgery	19.8%	74.3%	5.9%
Dental Care	0.6%	86.2%	13.2%

Note: The distribution of dental care might underestimate use of Public facilities

Out of Pocket Expenditures

Table 32 shows that annual household health expenditures by governorate. Unlike use rate where one did not observe inequities in access the examination of expenditures does raise some equity concerns. On average Lebanese households spend 2,609,000 LL per year on health care. However, households in the Mount of Lebanon spend nearly twice as much on health as households in the North of Lebanon. Similary, one observes a clear correlation between household income and health expenditures. Households with lower incomes spend far less on health care than those with higher incomes. This inspite of the fact that they tend to use more health services on a per capita basis than higher income households.

Table 32: Annual Household Health Expenditures by Governorate and Income (‘000 LL)

Category	Amount (‘000 LL)
Total Sample	2609
Governorate Beirut	 2866

Beirut Suburb	2820
Mount of Lebanon	3518
South of Lebanon	2146
North of Lebanon	1870
Nabatyeh	2026
Bekaa	2440
Household Income (‘000 LL)	
Less than 300	1396
300 to 500	1679
500 to 800	2488
800 to 1200	2973
1200 to 1600	3772
1600 to 2400	3874
2400 to 3200	4702
3200 to 5000	5592
5000 and above	4221

Table 33 gives the annual per capita expenditures by type of service and Table 34 gives the percentage distribution of these expenses. Per capita expenditures amounted to 522,000 LL per year. Of these 15% was spent on insurance, 10% on hospitalization, 2% on one day surgery, 22% for dental care, 25% for outpatient care (exlcuding drugs), and 27% on drugs. Once again the expenditures on pharmaceuticals only reinforces the need to better manage and control this sector. Similary, the high share of dental expenditures coupled with the access issues observed earlier point probably point to the need to find ways of increasing insurance coverage for dental care.

Table 33: Annual Per Capita Expenditures by Type of Service (‘000 LL)

Item	Per Capita
Insurance	75.80
Hospitalization	52.80
One day Surgery	8.80
Dental Care	114.00
Out Patient Care (Break down)	191.40
Consultations	75.40
Radiology	14.00
Medical Treatment	3.60
Lab Tests	27.60
Emergency Services	1.00
Vaccination	3.00
Medicines (OP)	60.80
Transportation	2.00
Other Procedures	4.00
Medicines (Non OP)	79.20
Total Health Expenditures	522.00

Table 34: Distribution of Out-of-Pocket Expenditures by Type of Service

Type	Percent
Insurance	15%
Hospitalization	10%
One Day Surgery	2%
Dental Care	22%
Outpatient Care (Excluding Drugs)	25%
Drugs	27%
Total	100%

Table 35 gives the total amount spent out-of-pocket by type of service and sector and Table 36 gives the percentage distribution. Households spent a total of 2,088,000,000,000 LL for health services. This was 69.74% of total health expenditures. Of this 97% was spent in the private sector, 2% in the NGO sector, and just 1% in the Public Sector.

Table 35: Distribution of Total Out-of-Pocket Expenditures by Sector and Service

Item	Total	Public	Private	NGO
Insurance	303,200,000			
Hospitalization	211,200,000	6,336,000	198,528,000	6,336,000
One day Surgery	35,200,000	2,464,000	31,680,000	1,056,000
Dental Care	456,000,000		456,000,000	
Out Patient Care (Break down)	765,600,000	6,192,000	735,024,000	24,384,000
Consultations	301,600,000	6,032,000	283,504,000	12,064,000
Radiology	56,000,000		56,000,000	
Medical Treatment	14,400,000		14,400,000	
Lab Tests	110,400,000		110,400,000	
Emergency Services	4,000,000		4,000,000	
Vaccination	12,000,000			12,000,000
Medicines (OP)	243,200,000		243,200,000	
Transportation	8,000,000	160,000	7,520,000	320,000
Other Procedures	16,000,000		16,000,000	
Medicines (Non OP)	316,800,000		316,800,000	
Total Health Expenditures	2,088,000,000	14,992,000	1,738,032,000	31,776,000

Table 36: Percentage Distribution of Out-of-Pocket Expenditures by Sector

Sector	Percentage
Public	1%
Private	97%
NGO	2%

Table 37 shows the percentage of household expenditures that went to pay for health services. On average, households spent a little over 14% of their household expenditures on health services. However, the burden of out-of-pocket expenditures as measured as a proportion of household expenditures is not equitably distributed. It is seen that nearly a fifth of expenditures in households in the lowest income category went to heatlh. The proportion spent on health goes down with income and households in the highest income group spend only 8% on health care. Even though there might not be inequities in access as measured by per capita use rates the burden of out-of-pocket expenditures is inequitably distributed. While the Ministry of Health pays for hospitalization costs of the uninsured (including the poor) there is probably a need to develop a targeted financing scheme that assures financial access to health services for low income families.

Table 37: Proportion of Household Expenditures Spent on Health

Income Category ('000 LL)	Percent
Less than 300	19.86%
300-500	17.96%
500-800	16.07%
800-1200	14.78%
1200-1600	14.02%
1600-2400	14.14%
2400-3200	11.36%
3200-5000	10.68%
5000 and over	8.05%
All households	14.06%

8. Cross Country Comparative Analysis

As we can observe in Table 38a, Lebanon lies in the higher end of the spectrum of Middle East and North African (MENA) countries in terms of GDP and GDP per capita. However, in terms of expenditure on health care, Lebanon surpasses all of the countries in the regional study. It spends over 12 percent of its GDP on health care, nearly thrice the regional average and higher than the OECD average. Public expenditure as a percentage of total health spending is one of the lowest in Lebanon amongst countries in the region.

Table 38a: International Comparison of Health Expenditures as a Percentage of GDP

Country or Region	GDP Per Capita (US$)	Health Expenditure (per capita US$)	Health Expenditures As Percentage of GDP (early 1990s) Total	Public Sources	Private Sources
Yemen	449	19	5.0	1.5	3.5
Egypt	1,016	38	3.7	1.6	2.1
Morocco	1,241	49	4.0	1.3	2.7
Jordan	1,475	136	9.1	5.2	3.8
Iran	1,776	101	5.7	2.4	3.3
Tunisia	2,001	105	5.9	3.0	2.9
Lebanon	***4,050***	***398***	***12.4***	***2.2***	***10.2***
Middle East & N. Africa	5,608	116	4.8	2.6	2.2
E. Asia & Pacific	970	28	3.5	1.5	2.0
OECD	24,930	1,827	8.3	6.5	1.8

Note: OECD Estimate in for 1994
Source: World Development Indicators, http://www.worldbank.org
Schiber G, Maida A,Health Affairs Vol. 18 # 3
Egypt National Health Accounts 1998
Lebanon: NHA 1998 findings
Yemen: Preliminary NHA 1997 findings
MENA Average includes the Gulf States (1994)

As shown in Table 38b, high levels of education and improvement in the nutritional status of the population continue to contribute to reducing the mortality rates. Lebanon has the second lowest under-five mortality rate and the lowest total fertility rate in the region. It also has one of the lowest maternal mortality rates in the region.

Table 38b: International Comparison of Fertility and Mortality Rates

		Mortality Rate	
Country	**Total Fertility Rate**	**Under Five Years**	**Maternal**
Yemen	7.6	113.0	1,471
Egypt	3.4	64.5	170
Morocco	3.1	68.0	372
Jordan	4.9	31.5	132
Iran	2.8	51.5	120

Tunisia	2.6	37.0	139
Lebanon	***2.7***	***35.0***	104

Source: Sector Strategy: Health, Nutrition, and Population, World Bank 1997

9. Main Policy Issues

Specific policy issues that stem out of the NHA findings are listed below:

- **Sustainability:** According to the Lebanon NHA estimates, Lebanon spends over 12 percent of its GDP on health care services. The poor performance of the economy, high net public debt, and recently introduced higher pay scales for public sector employees are all bound to put increasing pressure on the government budget. While important health problems are still related to infectious diseases, chronic and degenerative diseases are becoming more prevalent. The causes for this are the aging of the population, changing dietary habits, and changes in lifestyle concomitant with urbanization.The prevalence of diabetes and hypertension are also on the increase. Unless there are significant gains in the country's economic performance, the current pattern of health care expenditures (as a percent of GDP) will cause significant strain on scarce health resources. In the long-term, this will likely adversely affect the current level and quality of services provided.

- **Cost Containment:** The Lebanese health care system is an example where the financing and provision functions are separated but without effective supply side cotrols to contain costs. The public financing agencies purchase health services from the private sector. Private sector providers are reimbursed using a combination of capitation and a fee-per-service basis, which may provide them with an incentive to provide unnecessary services. The most expensive health services (cancer, dialysis, kidney transplant, open heart surgery, chronic diseases, and burns) are provided either free or at minimal copayment by government agencies. The Ministry also pays for hospitalization costs for all uninsured and given data gaps it is possible that private insurance shifts the burden of high cost services to it. All of these factors contribute to cost escalation. *Provider Payment reforms are key to cost containment*. In this regard the Ministry of Health started implementing a flat rate system for same day surgical procedures in May 1998. An analysis conducted on the potential impact of extending this to other surgical procedures indicated that this might lead to lower costs.

Table 39 below shows that each of the principal financing intermediaries has a separate supervising Ministry. This makes inter-agency coordination difficult. At a minimum consideration should be given to setting up an institution that can coordinate payments, monitor utilization, and oversee providers across the different public financing agencies.

Table 39: Financing Agents and their Supervisory Ministry

Financing Agency	Supervising Ministry
NSSF	Ministry of Labor
CSC	Presidency of the Council of Ministers
Army	Ministry of National Defense
ISF	Ministry of Interior
GS+SS	Ministry of Interior
Private Insurance	Ministry of Economy and Commerce
Mutual Funds	Ministry of Housing and Cooperatives
MOH	Ministry of Health

Source: Ammar et.al., 1999

Centralized budgeting and managerial controls extend little authority and discretion to managers of public facilities. Hence, managers are provided with few incentives to engage in cost containment efforts. The Ministry of Health has initiated efforts to make its hospitals autonomous. This effort needs to be strengthened and expanded.

- **Rationalizing Capacity in the Hospital Sector**: The Lebanon NHA findings draw attention to the fact that 62% of public expenditures are spent on hospital care. Indiscriminate capital investment in the private hospital sector and little regulation has resulted in a surge in the number of private hospitals. With 2.88 beds per 1000 population Lebanon has the highest ratio of bed to population among the countries participating in the regional NHA initiative. However, 67% of these beds are in hospitals with less than 70 beds. This coupled with the multi-specialty nature of these facilities leads to inefficiencies. Quality of care and financial viability of many of these facilities remains a concern.

- **Reallocating expenditures from Curative to Primary Health Care:** Under the present breakdown of expenditures, less than 10 percent of resources are allocated to primary health care. Not only are few resources spent on primary and preventive health care services it appears the NGO and public systems do not have the capacity to fully utilize these resources. Investments in preventive measures (including changes in lifestyle) are likely to result in substantially limiting curative expenditures in the future. In the wake of the rapid expansion of the curative sector, the primary health care sector has languished. There is a need to both strengthen the capacity of the system to deliver primary health care services as well as increase funding for these services.

- **Controlling Capital Investment in Medical Technology:** The Lebanon NHA study reiterates previous findings that government reimbursements for high cost services has resulted in a rapid growth of high technology centers. This in turn has contributed to cost escalation. As example, as the number of centers capable of doing open-heart surgeries grew from 3 to 8, the number of surgeries performed increased from 600 to 1800, and expenditures rose from 8 billion pounds to 25 billion. The Ministry of Health spends about 75% of its budget on special programs. For efforts at cost containment to be effective policies need to be developed that will control investments in medical technology.

- **Rationalizing Expenditures on Pharmaceuticals:** Pharmaceuticals accounted for over 25% of total health expenditures. Ninety-eight percent of the pharmaceuticals sold in Lebanon are trade names with generics accounting for only 2%. Imported drugs account for 94% of consumption with locally manufactured drugs making up only 6%. Thus, Lebanon has not only high per capita expenditures on pharmaceuticals (USD 120) but almost all of the drugs are trade name products that are imported into the country. Expenditures on pharmaceuticals have been increasing at 7% per annum a figure that is higher than the rate of inflation. Between 1995 and 1998 the number of pharmacies grew by 59% and the number of registered pharmacists grew by 34%. Further we saw that estimates on the total size of the market vary significantly. While some of this might be explained by the fact that households might be over reporting expenditures on drugs there exists the possibility that drugs are either making their way intot the country bypassing official channels or there is some double billing taking place. The high level of expenditures also is likely due to the lack of a significant policy for using generic drugs,

as substitutes for other equivalently higher prices prescription drugs. Hence, to effectively contain overall health care expenditures, the Government of Lebanon should initiate policies for improving the efficiency by which pharmaceuticals are imported, distributed and sold in the country and improve its management and oversight of this sector.

- **Expanding health insurance coverage to the uninsured and limiting multiple coverage:** In Lebanon health insurance is tied with employment and those in low income households are less likely to be employed in the formal sector. Further the presence of multiple insurance coverage also allows for inefficiencies, double dipping, over consumption of health services, and cost escalation. It is very difficult to obtain information from private insurance companies on premiums, claims, loss ratios, and profits. The government needs to improve its management of the private insurance market and reduce multiple insurance coverage if it wants to control health care costs.

- **Equity:** Household out-of-pocket expenditures account for 69% health expenditures in Lebanon. The household survey shows that there does not apper to be inequities in access to health care. Lower income households tend to use more health care per capita than higher income households. It is only with regard to dental care that we observe inequities in access. However, when one analyzes the burden of out-of-pocket expenditures it is appears the burden is inequitably distributed with lower incomes households spending a much greater proportion of their incomes on health than higher income households. Even though the Ministry of Health as the insurer of last resort pays for hospitalzation costs for all insured (including those with low incomes) there is no formal financing mechanism for primary and preventive health services. As part of the health financing reform the government might want to consider designing a targeted program to provide quality basic health services for those with low incomes.

10. Process and Lessons Learned

A number of major obstacles were experienced in compiling the National Health Accounts are listed below:

1) *Availability of Data*: Public sector agencies were very cooperative in sharing information with the NHA team. However, collecting information on the distribution of expenditures by function, and linking expenditures to utilization was problematic. Information on private sector expenditures was unavailable and the team had to resort to primary data collection.
2) *Quality, Validity, and Reliability of Data*: Even when data was available its quality, validity, and reliability remained a matter of concern. Discrepancies existed between expenditure data provided by the Ministry of Finance and government agencies. Reconciling these was not always easy and required numerous iterations. Reliable data on the number of beneficiaries and dependents by type of social insurance scheme is difficult.

3) *Lack of Standard Definitions*: Different agencies classify expenditures differently, and do not have the same definitions for functions and services. This resulted in significant difficulties in compiling the NHA report

11. Recommendations by NHA Team for Institutionalization

The ideal option would be to institute an "NHA unit" within the proposed "Programs and Projects Unit"(PPU) at the Ministry of Health. This PPU unit has been proposed to the Cabinet few month ago and it is under institutionalization.

In general, the proposed PPU unit at the MOH should be able to act on the following issues:

1. Assist the Minister of Health and the Health Care Steering committee in the definition of policy issues.
2. Prepare Terms of Reference for the different technical assistance contract.

3. Recommend the types of research that should be conducted to assist health policy
4. Make appropriate recommendations to the policy makers in the MOH and other Financing agents.

The Scope of the NHA unit, which is part of the PPU, shall provide the following regarding:

1. Health policy and strategy:

- Issue reports on the health situation based on information gathered by the NHA team or special surveys
- Assist the policymakers at the level of Public Financing agents in the development of a National Health Strategy.
- Make recommendations for reallocation of resources to improve equity and efficiency

2. Financing and Budgeting:

- Assist in the development of health financing policy and strategy.
- Develop guidelines for more effective and efficient use of resource.
- Perform costing studies of contracting health services and comparative analysis among different stakeholders.
- Assist policymakers in evaluating measures such as prepayment, co- payment and flat rates.
- Develop yearly NHA matrices and reports.

Annex 1

Conceptual framework and
Functional Classification System
For
National Health Accounts
LEBANON

September 1999

Note on preparation

Prepared by the task force groups of NHA Lebanon based on the International Classification of Health Expenditure (ICHE) and practices of the OECD and other countries.

Conceptual framework

The compilation of National Health Accounts (NHA) estimates for Lebanon accords both conceptually and methodologically to the compilation of National Health Accounts (NHA) in other advanced economies. There is currently no internationally accepted and agreed framework for NHA. A special effort has been made to ensure maximum compatibility between the Lebanon NHA framework and recent OECD proposals for standardisation of health accounts *(Principles of Health Accounting for International Data Collections, OECD 1997*). These OECD proposals are yet to be fully implemented by most OECD member countries, and so Lebanon NHA can be regarded as being based on a technical standard in advance of most OECD countries, and one that will be adopted gradually during 1998-2000. The most comparable health accounts in terms of comprehensiveness, international comparability and detail to those of Lebanon will those of the United States, Germany, Canada and Australia.

The conceptual framework for Lebanon's NHA comprises the definition of what constitutes health expenditure, the institutional entities involved, and the specification of the types of desegregation possible. The structure includes the classifications and nomenclature used to identify and desegregate expenditures, either by purpose, type or ultimate beneficiary, and the temporal reference period.

The conceptual framework and structure for Lebanon's NHA was developed according to the following criteria:

It should be policy relevant and easily interpretable by health sector policy makers
It should be compatible with international practice
It should be reproducible
Categories used in classifications should be mutually exclusive
It should be feasible to estimate given secondary data regularly available, or with limited primary data collection.

A systematic review of international practice with respect to definitions and the functional classification of expenditures were carried out. Based on this review, the system of classification of expenditures and the corresponding definitions used in the estimates was developed through a process of consultation and consensus involving a group of government representatives appointed by the Health Sector Reform group. Group members of NHA represented all government agencies and bodies involved in the financing and provision of health care.

A. Health expenditure definition

Health expenditures are defined as all expenditures or outlays for prevention, promotion, rehabilitation, and care; population activities, and emergency programs for the specific and predominant objective of

improving health. Health includes both the health of individuals as well as that of groups of individuals or populations. Expenditures are defined on the basis of their primary purpose, regardless of the primary function or activity of the entity providing or paying for the associated health services. Expenditures for the purpose of training or educating health sector personnel, which imparts health sector specific knowledge and skills, as well as health-related research are defined as being for the purpose of health improvement when applying this definition.

There is no internationally accepted definition of what constitutes health expenditures, but this definition is comparable to that conventionally used in other national health accounts and national health expenditure studies.

B. Total National Health Expenditures (TNHE)

These are defined as all health expenditures for the benefit of individuals resident in Lebanon. Expenditures for the benefit of Lebanese citizens living abroad are excluded, although expenditures in other territories or countries for the benefit of residents of Lebanon are included, as well as expenditures for the benefit of foreign citizens resident in Lebanon. For the purposes of the NHA, the scope of the resident population is defined as excluding all Strangers.

This definition is comparable to that used by HCFA in estimating US National Health Expenditures. The conceptual framework for Lebanon's NHA as specified in the paper, *Functional Classification System for National Health Accounts of Lebanon* provides a comprehensive definition of what constitutes health expenditure, the institutional entities involved and the specification of the types of desegregation involved.

C. Classification

In Lebanon's NHA, expenditures are measured and organised on the basis of the entities making the expenditures, and those entities passing or using the expenditures. The classification of entities within Lebanon's health care system is thus critical for estimating and structuring Lebanon's NHA. Three sets of entities are defined: (i) financing sources, (ii) financial intermediaries and (iii) providers. Entities are defined as economic agents who are capable of owning assets, incurring liabilities, and engaging in economic activities or transactions with other entities. They can consist of individuals, groups of individuals, institutions, enterprises, government agencies or private non-profit bodies/institutions.

D. Financing sources

Financing sources are defined as entities, which ultimately bear the expenses of financing the health care system. In operation this definition, a similar convention to that used in the UN SNA (System of National Accounts) is followed. In general, non-government organisations are treated as ultimate financing sources, not the households or other entities that pay contributions to them. Similarly, the Government is considered an ultimate financing source, not the entities, which pay taxes to it or provide it with revenues. One difference to SNA practice is observed; where firms or employers provide or pay for health services as part of the regular compensation of employees, these expenditures are treated as being by the employer, and not expenditures out of the income of households, which is SNA practice.

Financing sources are grouped into four mutually exclusive institutional sectors:

1) Government
2) Private bodies or Employers
3) Donors on Health
4) Households

This broad grouping of sectors corresponds both to general national income accounting practice, as well as NHA practice in most countries.

Private bodies are the category explicitly identified in national income accounting. In the case of Lebanon's NHA, this category of funding sources refers almost exclusively to private employers who spend money to provide medical benefits to their employees. It does not refer to all employers, as the government's expenditures on providing medical benefits to civil servants are counted as expenditures by the Government of Lebanon. The term "private employers" can thus be used interchangeably with that of

Donors' expenditures on health would in theory include donations by private firms to charities for health purposes.

All other out of pocket expenditures will be categorised in Households. These expenditures are not covered explicitly by the estimation procedures owing to lack of data.

E. Financial Intermediaries

Financial intermediaries are defined as entities that pass funds from financing sources to other financial intermediaries or providers in order to pay for the provision of health services.

Table 1: The following financial intermediaries are identified in the Lebanon NHA:

HF.1 General Government Financing of Medical Care:
HF1.1 Territorial Government
HF1.1.1 Central Government
HF1.1.1.1 Ministry of Health
HF1.1.1.2 Army
HF1.1.1.3 Internal Security Forces
HF1.1.1.4 Ministry of Social Affairs
HF1.1.1.1 Ministry of Education
HF1.1.2 Regional Government or Mohafazat
HF1.1.2.1 Health Department
HF1.1.2.2 Other relevant Department
HF1.1.3 Local Government or Municipality
HF1.1.3.1 Health Department
HF1.1.3.2 Other relevant Department
HF1.2 Social Health Insurance Institutions
HF1.2.1 Civil Servants Co-operative
HF1.2.2 National Social Security Funds
HF1.2.3 Mutual Funds

HF.2	Private Sector Financing of Medical Care:
	HF2.1 Private Health Insurance
	HF2.2 Private Households' out of pocket
	HF2.3 Other Private Financing Intermediaries
	HF2.3.1 Private Firms
	HF2.3.2 Non Government Organisations
	HF2.3.3 Other Private Financing Intermediaries

F. Providers

Providers are defined as institutional entities that produce and provide health care goods and services, which benefit individuals or population groups.

Table 2: The following Providers of Health Care are identified in the Lebanon NHA:

HI.1	Hospitals
	HI1.1 General Hospitals
	HI1.1.1 General Private Hospitals
	HI1.1.2 General Public Hospitals
	HI1.2 Mental Health and substance abuse Hospitals
	HI1.3 Speciality Hospitals (other than mental health)
HI.2	Nursing and residential care facilities
	HI.2.1 Nursing care facilities
	HI.2.2 Residential mental retardation and mental health
	HI.2.3 Community cares facilities for the elderly
	HI.2.4 Other residential care facilities
HI.3	Non-Institutional health care providers
	HI.3.1 Offices of Physicians
	HI.3.2 Offices of Dentists
	HI.3.3 Offices of Paramedical practitioners
	HI.3.4 Outpatient cares centres (Policlinics)
	HI.3.5 Medical and Diagnostic laboratories
	HI.3.6 Home Care Services
	HI.3.9 All Other Ambulatory Health Care
HI.4	Retail sale and Other providers of medical goods
	HI.4.1 Dispensing Chemists
	HI.4.2 Retail Sale of Optical glasses & other vision products
	HI.4.3 Retail Sale of Hearing aids
	HI.4.4 Retail Sale of Medical appliances (other than optical & hearing)
	HI.4.9 All Other miscellaneous sale and other suppliers of Pharmaceuticals & goods
HI.5	Other Institutions providing public health care programmes
HI.6	General Health Administration and Insurance
	HI.6.1 Government Administration of Health

	HI.6.2 Private Administration of Health
HI.7	Educational Institutions (providing Education and R&D on Health)
HI.9	All Other Industries
	HI.9.1 Military Health Services Institutions
	HI.9.2 Prison Health Services Institutions
	HI.9.3 School Health Services Institutions
	HI.9.9 All Other health Services Institutions

G. Functions

This classification system was developed following close consultation with relevant Stakeholders and Public Financing agencies. For reasons of international comparability it is based closely on the Draft International Classification for Health Expenditure (ICHE) proposed by OECD in 1997 (OECD 1997). Consistent with the OECD approach, all health expenditures are categorised into two types of function:

1. Core functions of medical care
2. Health-related functions

Each of these are further desegregated to give a total of nine major functions of health care expenditure, as shown:

1. Personal health services
2. Medical goods
3. Collective health services
4. Health program administration and health insurance
5. Education and training of health personnel
6. Investment into medical facilities
7. Research and development in health
8. Environmental health
9. Other health related functions

Each of these are further subdivided into smaller and more specific groups of functions, all of which are assigned a specific code, based closely to ICHE code. Full details are given in *Functional Classification System for National Health Accounts of Lebanon*, which accompanies this report. Table 3 presents the full listing of functions used.

Overview

This document provides a set of classifications for use in Lebanon NHA, developed through a process of review of international practice and deliberation by task groups appointed by the Lebanese Ministry of Health and all other Public Financing Agents. Included is a review of current definitions and classifications used in NHA work by the Organisation of Economic Co-operation and Development (OECD). OECD countries were selected on the basis of feedback received from the NHA Team in Lebanon. On the basis of these approaches, a draft working paper was produced with recommendations as to options for the framework to be used in Lebanon NHA and distributed among members of the NHA team. The paper was revised to incorporate comments made by the NHA team.

Preparation of this document involved a systematic review of the current definitions used by the OECD countries.

OECD 1998 is the most recent version of the set of definitions used by OECD in preparing its annual estimates of health spending in the OECD. It has been developed over several years in an ongoing attempt to standardise the available data reported by member countries, and therefore reflects substantially the structure of the health expenditure reporting systems in individual countries, in particular those of USA.

OECD Proposal (October,1997 version) is a new set of classifications and frameworks prepared by the OECD secretariat for measuring health expenditures in a manner consistent with other UN statistical reporting systems and the existing OECD database. It differs from OECD 1998 in that it proposes a different breakdown or classification of health expenditures, and in that it provides much more detailed sets of definitions for the various types of expenditures. Its functional classification of health expenditures, the ICHE (International Classification of Health Expenditures) is presented in four levels of desegregation, each level of which is labelled according to a system of 1-4 digit codes. OECD plans to test this new approach during the next two years, and based on resulting modifications and feedback from non-OECD countries and experts to propose a revised version of the Proposal to Eurostat and other UN agencies as a global standard for health expenditure estimation. We have included the OECD Proposal in our review, as it is likely that it will lead eventually to a new international system of health expenditure estimation. However, the OECD Proposal is yet to be ratified by the OECD itself, and currently contains several major defects, which we believe, will force major modifications. For this reason, we have focused on those elements in the OECD Proposal, which are most useful and likely to stand the test of time.

A. Functional classification of health expenditures

OECD Proposal's functional classification makes a basic distinction between core functions of health care and other health related functions. This same distinction is used in Lebanon NHA, as it separates those expenditures for which there is universal agreement about their classification as health, from those for which there is considerable national variation and dispute. OECD Proposal then desegregates core functions into four types at the first level (or one digit level of the ICHE):

1. Personal medical services

2. Distribution of medical goods
3. Collective health services
4. Health programme administration and health insurance

The draft functional classification used in Lebanon NHA uses this same classification. At the next level of desegregation, Lebanon NHA deviates from that presented by the OECD Proposal (2 digit level in ICHE), and instead follow the general practice used in national NHA work by USA and that used in OECD 1998. The OECD Proposal presents a substantially different functional classification at its two-digit level, which does not differentiate between inpatient and outpatient expenditures, and instead focuses on the clinical purpose of patient treatment expenditures. In our judgement, this new classification is unlikely to survive subsequent revisions, as most policy makers are actually interested firstly in knowing the inpatient/outpatient breakdown, and since most countries do not have the data to allow estimation of the categories proposed in OECD Proposal.

Table 3 gives the functional classification for health expenditures used in Lebanon's NHA. It includes the codes proposed for Lebanon based on the International Classification for Health Expenditures (ICHE) codes. ICHE is a standard developed by the proposed OECD manual. The remaining part of the document concentrates on presenting the definitions used by national agencies when reporting national statistics on health expenditures, or in their national health accounts, as well as those in use or proposed currently by OECD.

The format of this document is as follows. The definitions used in Lebanon's NHA for each item in the classification system are presented first. This is followed by a discussion of the relevant OECD and national definitions for those items. In many cases the only OECD definitions are those from OECD 1998. The definitions given for individual countries are the ones used in reporting national health expenditures through the OECD secretariat, where they deviate from the OECD 1998 definitions.

This document is a draft, and should be treated as a work in progress.

Table 3: Functional classification of health expenditures in Lebanon

FUNCTIONS	
Core functions of health care	
HA.1	Personal Health Services
	HA.1.1 Hospital Services (Inpatient)
	HA.1.1.1 In hospital surgical care
	HA.1.1.2 In hospital Medical Care
	HA.1.2 Ambulatory Services
	HA.1.2.1 Consultation fees (out)
	HA.1.2.2 Diagnostic Services
	HA.1.2.3 Laboratories Services
	HA.1.2.4 Dental Services
	HA.1.2.5 Physical Rehabilitation Services
	HA.1.2.6 Same Day Surgery
	HA.1.2.7 Other treatments
	HA.1.2.8 Drugs for Immunisation and Dispensary
	HA.1.3 Residential nursing care/long term care
	HA.1.4 Home care
	HA.1.5 Emergency rescue
HA.2	Medical Goods
	HA.2.1 Pharmaceuticals
	HA.2.2 Medical Supplies
	HA.2.3 Therapeutic appliances and medical equipment

HA.3	Collective health services
	HA.3.1 Health promotion and disease prevention
	HA.3.1.1 Reproductive Health
	HA.3.1.1.1 Family planning
	HA.3.1.1.2 Maternal Health
	HA.3.1.1.3 Neonatal Care
	HA.3.1.1.4 Others
	HA.3.1.2 Disease prevention
	HA.3.1.2.1 Prevention of communicable diseases
	HA.3.1.2.2 Prevention of non-communicable diseases
	HA.3.1.3 Health promotion
	HA.3.1.4 School health services
	HA.3.1.5 Geriatric Care
	HA.3.1.9 Other Health Promotion
	HA.3.2 Other collective health services (Occupational Health care)
HA.4	Health programme administration and health insurance
	HA.4.1 Health Programme Administration
	HA.4.2 Administration of Health Insurance
Health related functions	
HA.5	Education and training of health personnel
HA.6	Investment into medical facilities
HA.7	Research and development in health
HA.8	Environmental health
HA.9	Other Health related functions

B. CORE FUNCTIONS OF MEDICAL CARE

Personal health services

DEFINITION FOR LEBANON NHA

Personal health services are defined as those, which can be directly allocated to individuals, as distinct from services provided to society at large.

Hospital services

DEFINITION FOR LEBANON NHA

1) Hospital services consist of all expenditures by hospitals, for in-patient services. This covers all services provided by hospitals to patients, including room and board charges, accident and emergency services, ancillary charges such as operating room fees, the services of resident physicians, in-patient pharmacy charges,, and any other services billed by private hospitals, or any such services paid for public sector hospitals

2) Same Day inpatients (generally patients discharged within the same calendar date) are included as part of hospital inpatient services. Physical and rehabilitation day hospital services are however excluded, and counted as Ambulatory care services (Physical rehabilitation).

Total expenditure on Inpatient Surgical Care

Total expenditure on Inpatient Medical Care

DEFINITIONS FOR LEBANON NHA

1) Expenditure on In Hospital Surgical and Medical Care services are defined as current expenditures by institutions or by hospital departments accommodating patients whose average length of stay is 30 days or less.

Total expenditure on Ambulatory care services

Consultation Fees (out)

DEFINITIONS FOR LEBANON NHA

1) Expenditures for services and medical products delivered by or under the supervision of medical practitioners registered under the Order of Physicians, working in both public and private sectors in facilities devoted solely to provision of outpatient services.

2) This includes salaries, pharmaceutical and other related expenses for services delivered in Public Health Care Centres under the supervision of the Ministry of Health or the NGO's, which are located separately from a hospital, as well as expenditures at private medical practitioner clinics.

3) Hospital outreach services under the supervision of medical practitioners such as the community psycho-geriatric team and community geriatric team are also included.

Diagnostic Services

DEFINITIONS FOR LEBANON NHA

Expenditures on diagnostic radiology services/procedures provided by private physicians' offices, commercial facilities and private hospitals to outpatients.

Laboratory services

DEFINITIONS FOR LEBANON NHA

Expenditures on laboratory tests and services provided by commercial clinical laboratories and public laboratories, but excluding hospital laboratories serving out-patients being treated by the same hospitals.

Dental services

DEFINITIONS FOR LEBANON NHA

1) Expenditures on dental services consisting of expenditures on professional health services provided by or under the supervision of dentists.

2) Expenditures on dental prostheses, which are recorded separately under distribution of medical goods, are excluded.

Physical rehabilitation Services

DEFINITIONS FOR LEBANON NHA

1) Expenditures on physical rehabilitation services consist of expenditures on all Physical/mental/psychiatric services provided outside of hospitals, but exclude hospital outreach services supervised by medical practitioners.

2) Drug rehabilitation and treatment of drug addicts are included

3) Other programmes run by NGO's (mainly religious agencies involved in medical and social work) which are more social rather than medical oriented in their counselling is not included.

4) In future, when data permit, this category will be reviewed and possibly further subdivided to distinguish between Physical rehabilitation care for the elderly and other for those who need such care for clinical reasons, or into any other categorisation that makes sense.

Same Day Surgery

DEFINITIONS FOR LEBANON NHA

1) Same Day Surgery operated in an Outpatient Care centres. SDS operated in a Hospital are not included.

Drugs for Immunisation and Dispensary

DEFINITIONS FOR LEBANON NHA

1) Drug rehabilitation and treatment of drug addicts are not included

2) Drugs for Immunisation distributed and run by the Public Health Care Centres and NGO's

Residential nursing care/long term care

DEFINITIONS FOR LEBANON NHA

1) This includes expenditures on establishments receiving elderly patients or patient requiring long term chronic cares, plus expenditures on rehabilitation, post-clinical care, and specialised chronic facilities, in which medical and paramedical services constitute a substantial part of total outlays.

2) Infirmary expenditures for public and private homes and nursing homes are to be included.

Home Care

DEFINITIONS FOR LEBANON NHA

1) Care provided in the home of a patient by a special unit of a conventional hospital or a community service, which substitutes for in-patient cares or retards the institutionalisation of a patient. The Ministry of Health does not yet implement this service and it is a project for the near future.

Emergency rescue

DEFINITIONS FOR LEBANON NHA

1) Expenditures for transportation in an especially equipped surface vehicle or by a designated air ambulance to and from facilities for the purposes of receiving medical and surgical care.
2) Emergency rescue includes emergency transport services of public fire rescue departments or other public transport services that operate on a regular basis for civilian emergency services (not only for catastrophe medicine).

Medical Goods

DEFINITIONS FOR LEBANON NHA

1) Expenditures on medicaments, prostheses, medical appliances and equipment and other health related products provided to individuals, either with or without a prescription, usually from dispensing

chemists, pharmacists or medical equipment suppliers intended for consumption or use by a single individual or household outside a health facility or institution.

2) Hiring of therapeutic equipment is included. Hiring and repair of therapeutic appliances and equipment is reported under the corresponding categories of goods. Also included is the service of dispensing medical goods, fitting of prosthesis and services like eye tests, in case these services are performed by specially trained retailed traders and not by medical professions.

3) Excluded are the following items: protective goggles, belts and supports for sport; veterinary products; sunglasses not fitted with corrective lenses; medicinal soaps.

Pharmaceuticals

DEFINITIONS FOR LEBANON NHA

1) Total expenditures on pharmaceuticals are defined as all expenditures for medicinal preparations, branded and generic medicines, drugs, patent medicines, serums and vaccines, vitamins and minerals and oral contraceptives.

Medical Supplies

DEFINITIONS FOR LEBANON NHA

1) Total expenditures on Medical Supplies are defined as all Medical Supplies cost more than $20. Less than $20 medical supplies are included in the Operating Room Charges (In hospital care)

2) An exact classification corresponding to specific product groups listed in the Ministry of Health.

3) Expenditures on other medical product defined as including blood pressure instruments, clinical thermometer, adhesive and non-adhesive bandages, hypodermic syringes, first-aid kits, condoms, incontinence material, hot-water bottles and ice bags, medical hosiery items such as elastic stockings and knee pads, but excluding automatic staircase lifts.

Therapeutic appliances and medical equipment

DEFINITIONS FOR LEBANON NHA

1) Expenditures on dental prostheses are defined as including dentures, but not the fitting performed by dentists.

2) Expenditure on glasses and other vision aids are defined as including corrective eye-glasses and contact lenses with corresponding cleansing fluid, and fitting by opticians.

3) Expenditures on orthopaedic appliances and other prostheses are defined as including orthopaedic appliances and other prosthetics, orthopaedic shoes, artificial limbs and other prosthetic devices, orthopaedic braces and supports, surgical belts, trusses and supports, neck braces.

4) Expenditures on medico-technical device are defined as including wheelchairs, powered and un-powered and invalid carriages.

Collective health services

Health promotion and disease prevention

Reproductive Health

Family Planning services

Maternal Health Care

Neonatal Care

Other reproductive Health

Disease prevention

Health promotion

School health services

Geriatric Care

Other Health Promotion

DEFINITIONS FOR LEBANON NHA

1) Collective health services are defined as including services designed to enhance the health status of the population as distinct from the curative services, which repair health dysfunction. Collective health services are separated into Reproductive Health, Disease prevention, Health Promotion, School Health Services Geriatric Care and other collective service.
2) Expenditures on health promotion and disease prevention include promotive and preventive services, whether prevention is provided as social programme (public or private, including occupational health) or is requested on the patient's own initiative. The range of these activities includes essentially the items listed after this.
3) Expenditures on maternal and neonatal care and expenditures on family planning and counselling cover medical service, such as genetic counselling and prevention of specific congenital abnormalities, prenatal and postnatal medical attention, well-baby health care, pre-school and school child health.

4) Expenditures for prevention of disease are desegregated into those for prevention of communicable diseases and those for prevention of non-communicable diseases.

5) **Expenditures for prevention of communicable diseases:** cover compulsory reporting/notification of certain communicable diseases and epidemiological enquiry of communicable disease; efforts to trace possible contacts and origin of disease; prevention of tuberculosis and tuberculosis control (including systematic screening of high risk groups); immunisation/vaccination programmes (compulsory and voluntary); vaccination under maternity and child health care. Excluded is vaccination for occupational health; vaccination for travel and tourism on the patient own initiative.

6) **Expenditures for prevention of non-communicable diseases:** include centres for disease surveillance and control; programmes for the avoidance of risks incurred and the improvement of the health status of the community in general, general health education and health information of the public, health education campaigns; campaigns in favour of healthier life-styles, safe sex etc.; information exchanges: *e.g*. alcoholism, drug addiction; environmental surveillance and public information on environmental conditions. Excludes activities of self-help groups, and health education campaigns of self-help groups;

7) Expenditures for health promotion include expenditures on interventions against smoking, alcohol and drug abuse include activities of community workers, but excludes activities of self-help groups.

8) School health services are defined as services provided specifically to school-going children or specifically within a school setting to schoolchildren.

9) Expenditures on Geriatric Care program

Other collective health services

Occupational health care

DEFINITIONS FOR LEBANON NHA

Expenditures on occupational health care are defined as covering expenditures incurred by employers on or off-business premises for the surveillance of employee health and therapeutic care.

Health programme administration and health insurance

DEFINITIONS FOR LEBANON NHA

1) Expenditures on health programme administration and health insurance consist of expenditures on health programme administration (HA.4.1) and administration of health insurance (HA.4.2).
2) Expenditures on health programme administration (HA.4.1) consist of expenditures for the strategic management, planning, regulation, and collection of funds and handling of the health delivery system.

3) The expenditure by private health insurance companies is the difference between revenue from premiums and claims' benefit, which may include a "technical reserves and profits" element. This expenditure is included in administration of health insurance (HA.4.2).

Health Related Functions

Expenditure on health education and training

DEFINITIONS FOR LEBANON NHA

1) Expenditures for education and training of health personnel by both public and private agencies and institutions. Salaries of nurse trainees are not included for time spent in providing care to patients, even if that is concomitant with a training element. However, salaries for trainees or other health personnel who are undergoing training in a classroom setting outside a clinical setting are included.

2) Expenditures by medical and nursing schools are included, as well as expenditures for professional further education by professional bodies, such as Schools of Medicine.

Investment in medical facilities

DEFINITIONS FOR LEBANON NHA

1) Expenditures on investment into medical facilities (HA.6) include all Health capital expenditure on plant and medical equipment and information systems funded by the government and the Private sector.

Health Research & Development

DEFINITIONS FOR LEBANON NHA

We adopt the definitions and approach presented in OECD Proposal for measuring expenditures on health research and development

Expenditure on environmental health

DEFINITIONS FOR LEBANON NHA

1) Exclude inclusion of this item until a better international standard definition is developed.

2) This entry measures investments and operating outlays on air cleaning and water treatment programmes largely determined on grounds of better health.

3) We include in this category health expenditure spent by Ministry of Environment.