Chapter Two

PROVISION OF HEALTH SERVICES

1- HOSPITAL CARE

The provision of health services by the Government has witnessed a meaningful decline during the long years of civil strife and socioeconomic disturbances that have hit the financial and institutional capacities of the public sector. After the war, only half of the 24 public hospitals were left operational, with an average number of active beds not exceeding 20 per hospital.

On the other hand, the private sector had developed both in number and capacity, representing today 90% of the total number of hospital beds in the country.

A big number of the existing 147 private hospitals are owned by physicians that are considered most of the time as eminent figures in the community. Some of those hospitals belong to charitable and religious congregations, and have a determining role inside the powerful "Association of Private Hospitals".

A classification of private hospitals has been undertaken by a committee chaired by the Director General of Health and

includes representatives of physicians, hospitals, universities and public payers. The classification questionnaire is composed of two components: the first one tackles managerial and medical issues (personnel, equipment, organization of work) and ranks hospitals into categories indicated by an alphabetical letter A to E. The second one deals with hotel services, and hospitals are classified accordingly from one to five stars. The best class of hospitals therefore is A five stars. University hospitals are classified U five stars. The same committee is currently supervising the Hospital Accreditation process.

Table II-1: Classification of Private Hospitals (1998)

	U	A	B	C	D	E	Total
5*	2	26	10	1	0	0	39
4*	0	3	19	10	3	2	37
3*	0	1	5	11	10	1	28
2*	0	0	0	2	6	10	18
1*	0	0	0	0	0	4	4
Total	**2**	**30**	**34**	**24**	**19**	**17**	**126**

The health system in Lebanon operates in a market economy environment, in which regulatory measures remain ineffective and the private sector continues to grow in a chaotic manner, leading to oversupply (table II-2) and inducing an unnecessary demand[1].

Table II-2: Availability of "high-tech" services and heavy equipment (2002)

	Number	Units per million persons
Open heart surgery departments	20	5
Cardiac catheterization laboratories	30	7.5
Dialysis centers	45	11.25
Kidney transplant centers	4	1
Bone marrow transplant units	3	0.75
Specialized burns centers	5	1.25
In-Vitro Fertilization services	12	3
Linear accelerator radiotherapy machines	7	1.75
Lithotripsy machines	27	6.75
CT Scan machines	60	15
MRI machines	25	6.25

Health Care services are mostly curative, provided in over-equipped private hospitals. The only shortage in medical equipment was in radiotherapy till 1996, when 3 linear accelerators were simultaneously installed in Beirut. Mean while, the Primary Health Care system (PHC) remains relatively weak. Most PHC facilities are small poorly equipped and understaffed dispensaries with activities limited to irregular medical consultations and drug dispensing.

The same discrepancy exists in human resources, whereby a surplus of physicians is accompanied with a shortage of nurses. In 1998, 8250 physicians were registered in the two Orders of Physicians representing more than 2 physicians per 1000 inhabitants. In the same year, all categories of nurses amounted to only half of the physicians' number, representing one nurse per 1000 inhabitants[2]. These figures are striking for their impact on both cost and quality of care. Private providers have been investing in areas allowing to maximize profit. Consequently poor regions were not attractive, and remained relatively underserved, creating equity problems. The highest per capita availability of beds is found in Beirut and surrounding localities of Mount Lebanon (table II-3). Concerned by the equity issue, the MOH aims at providing equal accessibility for the uninsured by striking contracts with providers in all regions (table II-4). Nevertheless the MOH attempts at rationalizing the system by setting regulation tools and standards remain unavailing, with the lack of enforcement.

Table II-3: Distribution of hospitals and MOH contracted beds by mohafazat

	Total Lebanon		Contracts with MOH 2000-2001		Contracts with MOH 2002 (Decree 7363)	
	# hosp	# beds	# hosp	# beds	# hosp	# beds
Beirut	**24**	**2201**	22	285	8	298
Mount Lebanon	**58**	**3981**	50	748	23	482
North Lebanon	**27**	**1924**	22	358	17	245
South Lebanon	**24**	**1659**	19	254	11	235
Nabatieh	**5**	**237**	4	77	5	40
Bekaa	**28**	**1531**	23	304	12	243
Total	**166**	**11533**	**140**	**2026**	**76**	**1543**

Table II-4: Available and MOH contracted hospital beds per thousand population by mohafazat

	Population	Available beds (Total)	MOH contracted beds
Beirut and Mount Lebanon	1,910,896	**3.2**	0.41
North Lebanon	807,204	**2.4**	0.30
South and Nabatieh	747,477	**2.5**	0.37
Bekaa	539,448	**2.8**	0.45
Lebanon (total)	**4,005,025**	**2.9**	**0.38**

Private hospitals do not deliver the same quality of services to the rich and poor, and frequently impose extra fees on patients admitted under constracts with the MOH. The majority of private hospitals (124 out of 164) are general and multidisciplinary with less than a 100-bed capacity. They are incapable of either achieving economics of scale or offering acute care of appropriate quality, which leads to an obvious problem of efficiency[3].

Table II-5: Distribution of private hospitals according to bed capacity by mohafazat

	Less than 100 beds		100-200 beds		More than 200 beds		Total	
	# hosp	# beds	# hosp	# beds	# hosp	# beds	# hosp	# beds
Beirut	16	452	5	764	3	971	**24**	**2187**
Mount Lebanon	40	2180	17	1343	1	205	**58**	**3728**
North Lebanon	21	1005	6	647	0	0	**27**	**1652**
South Lebanon	18	928	3	347	1	268	**22**	**1543**
Nabatieh	5	237	0	0	0	0	**5**	**237**
Bekaa	24	1071	4	240	0	0	**28**	**1311**
Total	**124**	**5873**	**35**	**3341**	**5**	**1444**	**164**	**10658**

Traditional public hospitals are rather small, with less than 70 active beds for the larger ones, are poorly equipped and lack qualified personnel. Physicians with low salaries tend to refer patients to their own paying private clinics and hospitals.

Nevertheless, this negative reality did not prevent the Government from deciding on building 12 new public hospitals.

The recent law of autonomy offers to the public hospital a real opportunity for better equipment, staffing and management, allowing it to become, not only complementary, but also competitive with the private hospitals. Five public hospitals are currently functioning under this law with apparently better results at least in three of them.

Public hospitals could contribute, thus, to resolving both equity and cost problems. They could also play a gate-keeping role helping in controlling the demand through a well-defined referral system.

2-AMBULATORY CARE

Ambulatory health care is mainly delivered by the big number of private medical and dental clinics, pharmacies and diagnostic facilities. According to the 1999 NHHEUS, the average utilization rate of ambulatory care is 3.6 visits per resident per year. Most of these are sought from unregulated solo practice clinics.

Non Governmental Organizations (NGOs) are very active in this area through a wide network that embraces the majority of 110 PHC centers and 734 dispensaries spread all over the country[4].

These NGOs facilities vary from single room understaffed dispensaries with irregular working hours, to well staffed health centers with modern equipment, such as EKG, US and X-ray machines, and medical laboratories. Physicians, for the majority specialists, work mostly as part-timers in these centers. Few medical personnel are available on a full-time basis, and the presence of qualified licensed nurses remains wishful.

During the war years, NGOs invested mostly in primary health care, in order to fill the gap resulting from the withdrawal of the public sector, and to respond to the population needs. NGOs

PHC centers and dispensaries have been able to survive often by relying on the support of the Ministry of Social Affairs (MOSA) and international donors, and on the collection of fees for service. The decline in international donations and the lack of volunteers in the after-war period have forced many health centers to increase their charges on patients.

The MOH provides vaccines free-of-charge for almost all health centers and dispensaries in the country. It procures essential drugs for free to public and NGOs contracted centers. The MOH finances the procurement of drugs for chronic illnesses conducted by YMCA. Those drugs are distributed to more than 400 health centers. It also provides treatment and follow up for tuberculosis patients through its 8 specialized TB centers.

Twenty six per cent of households seek services from public and NGOs dispensaries, which represent the only affordable option for the most deprived[5].

The benefit package of the insured, 45.9% of the population, varies according to the insuring agency. Medical consultations and dental care are excluded for respectively 15.7% and 60.8% of the insured. Consequently totals of 59.5% and 80.2% of the population do not receive any reimbursement for medical consultation and dental care respectively[6].

3-HEALTH PROGRAMS

During the years civil strife, UN agencies played a major role in conducting essential health programs in joint coordination with NGOs. Activities of NGO's centers depended heavily on the availability of drugs. UNICEF used those donated drugs as incentives to encourage preventive programs among NGOs.

When the MOH took back the leadership of these programmes, new incentives were introduced through contractual agreements[7]. Programs are now run through, a network composed of MOH, MOSA, and NGOs PHC centers, that covers the whole country.

NGOs contributed successfully to joint preventive programmes carried out by the MOH and UN Agencies, such as the Expanded Programme for Immunization (EPI), AIDS control and the control of diarrhea and respiratory infection. More than 400 centers are affiliated to the reproductive health programme, and undertake family planning activities and pre-natal care.

In addition to the provision of services, some NGOs play a meaningful supporting role in the health system by conducting surveys or training workshops, or by providing logistical support through purchasing, stocking and distributing essential drugs to a vast network of PHC centers, thus ensuring the follow-up of chronically ill patients[8].

3.1 Expanded Immunization Program

The Expanded Immunization Program (EPI) is totally financed and led by the MOH. UNICEF, MOSA and NGOs are active partners. Immunization is routinely conducted in almost all health centers and dispensaries operating in the country. The National Calendar includes vaccinations against poliomyelitis (OPV), diphtheria, tetanus, pertussis (DTP), measles, mumps, rubella (MMR) and hepatitis B. The number of centers involved has reached in 1998 a total of 110 public centers and 540 NGOs'. This partnership has successfully achieved the targeted objectives of the program, as shown in table II-6. Knowing that private for-profit physicians' clinics still cover more than 50% of the immunization activities.

In addition to routine vaccinations, the EPI program started implementing in 1995 National Immunization Days, undertaken twice a year for polio eradication. Table II-7 shows the extensive coverage achieved in 5 consecutive years. The last confirmed case of polio in Lebanon was reported in 1994.

Table: II-6: Immunization coverage (1999)

Vaccine	Target group(1)	Targeted numbers	Number of doses (Routine Vaccination)	Coverage
DTP (3rd dose)	< 1 year	66,245	62,471	94.30%
Polio (3rd dose)	< 1 year	66,245	62,471	94.30%
MCV (2)	< 1 year	66,245	53,661	81.00%
MMR (3)	1-2 year	66,245	65,505	98.88%
Hep B (3rd dose) (4)	< 1 year	66,245	56,843	85.81%

(1) : Target group corresponds to the denominator for calculating coverage.
(2) : MCV= measles containing vaccine
(3) : A second dose of MCV is part of the routine immunization schedule. MMR (Mumps, Measles, Rubella) was introduced in 1995.
(4) Hepatitis B vaccine was introduced in 1998

In 1997, a measles outbreak occurred in North Lebanon, where 900 cases were reported, leaving 2 deaths. A mopping-up immunization campaign was conducted, involving 70,000 children under 15. No measles epidemics have been witnessed since. However, few sporadic cases are reported yearly (10 cases in 2001).

Table II-7: Achieved coverage through National Immunization Days (1995 to 1999)

Year	Target 0-59 months	Number reached	Percent coverage reached
1995	375,000	359,605	95%
1996	370,000	366,300	99%
1997	375,000	368,400	98%
1998	375,000	362,426	96%
1999	375,000	365,212	97%

3.2 Tuberculosis Control Program

The MOH takes full charge of tuberculosis patients including non-Lebanese residents. Services are provided through 8 TB centers and include diagnostic, therapeutic, close follow-up and prevention activities.

In 1998, the program started implementing the Directly Observed Treatment Strategy (DOTS). Inspite of the worldwide increasing prevalence of this disease in relation with the AIDS pandemic, and the alarming increasing resistance to antibiotics, the National TB control program has been capable to a large extent, to

control the disease. The average number of one thousand cases treated yearly in the early nineties, has been going down to 700 in 1998 to reach 570 active TB cases in 2001. The DOTS is currently widespread, and an active surveillance system is in place. The recovery rate has reached 90% of treated patients.

3.3 Reproductive Health Program

The Reproductive Health Program was launched by the MOH in September 1998, in collaboration with UNFPA and the MOSA. Its activities include providing supplies and drugs, medical equipment, as well as training and to some extent physical rehabilitation. By year 2000, 430 centers had been included in the program, of which 86 were equipped with adequate equipment, including 10 with ultrasound machines, and 42 were rehabilitated. Sixteen training workshops had been held where 420 health professionals and health workers had received training.

Table II-8: Distribution of centers benefiting from the Reproductive Health Program by mohafazat

Region	NGOs	MOH	MOSA	Total
Beirut	21	2	3	**26**
Mount Lebanon	50	10	29	**89**
North Lebanon	59	18	25	**102**
South Lebanon	69	18	45	**132**
Bekaa	49	13	19	**81**
TOTAL	**248**	**61**	**121**	**430**

3.4 AIDS Control Program

This program was launched by MOH and WHO in 1989. A yearly MOH budget of 700 million LP is devoted to this program, which has been undertaking preventive and educational campaigns largely covered by the media. NGOs and especially youth associations are actively involved in anonymous testing and counseling activities. In 1998, the MOH embarked in providing

multi-therapy drugs. The total number of declared cases amounted to 700 in 2001, while the WHO estimate is of 2000 HIV positive cases.

3.5 Medication for Chronic Illnesses Program

This program is financed and supervised by MOH, while, purchasing, storage, and distribution of drugs are delegated to YMCA. Drugs are dispensed by public and NGOs health centers to chronically ill indigent patients. The social and financial status of beneficiaries and their families is assessed by professional social assistants. By year 2000, 408 centers had been affiliated with the program, and 120,539 patients were benefiting from its services. The total budget of this program is over 10 billion L.P., including the 3.9 billion paid yearly by MOH for procurement of drugs.

Table II-9: Distribution of health centers and beneficiaries of chronic illnesses drugs program by mohafazat and involved parties

Region	NGOs Centers	MOH Centers	MOSA centers	Total number of centers	Number of beneficiaries
Beirut	57	4	2	63	22,660
Mount Lebanon	125	7	2	134	30,604
North Lebanon	69	5	1	75	27,323
South Lebanon	66	6	9	81	22,580
Bekaa	46	7	2	55	17,372
TOTAL	**363**	**29**	**16**	**408**	**120,539**

***Source**: YMCA 2000*

4-HUMAN RESOURCES FOR HEALTH

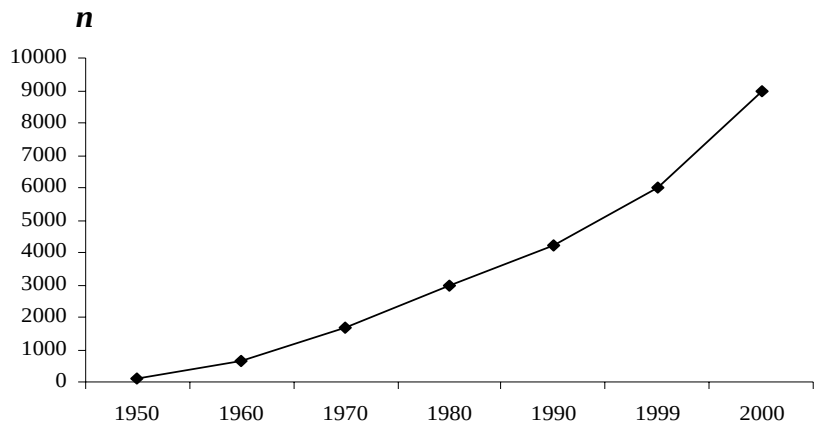
4.1 Physicians

During the nineteen nineties the number of physicians was growing by 8.3% per year, in comparison with a population growth rate of 1.6%[9]. The number of registered physicians has exceeded 10,000 in 2002, of which more than 70% are specialists.

A discrepancy exists in the distribution of physicians across regions, with a higher proportion in Greater Beirut. The physician

to population ratio is currently more than 6 MDs per thousand inhabitants in Beirut and less than 2 per thousand in the Bekaa. The ratio of hospital beds per physician is less than one hospital bed per physician in Lebanon, while this ratio is between 2 and 3 in most countries[10].

Fig II-1: Number of Registered Physicians from 1950 through 2000



***Source**: Order of Physicians*

Medical graduates have to pass the Colloquium exam carried out by the MOH and the Ministry of Education (MOE) in order to get a license to practice. Medical practice is not allowed before registration in the Order of Physicians.

There exists two orders of physicians in Lebanon: the Order of Physicians of Lebanon in Beirut with 8800 registered physicians, and the Order of Physicians of the North with 1400 registered members.

The proportion of those registered physicians practicing abroad is ill-defined and was estimated by the National Provider Survey as falling somewhere between 15 and 20%.

Table II-10: Distribution of physicians by mohafazat and specialty (1999)

Mohafazat	Surgical Specialties	Medical Specialties	Pediatrics	General practice	Total	Percent
Beirut	835	878	257	847	**2817**	**32.4**
Mount Lebanon	998	886	294	1033	**3211**	**36.9**
North Lebanon	328	248	98	341	**1015**	**11.7**
South Lebanon	385	278	114	263	**1040**	**12.0**
Bekaa	229	126	58	204	**617**	**7.1**
Total	**2775**	**2416**	**821**	**2688**	**8700**	**100**

Source: *Order of Physicians*

Fellowships and grants to study medicine abroad especially in the former Soviet Union and Arab countries, have contributed in the tremendous increase in the number of physicians. Besides its effect on over supply, the multiplicity of graduating countries has an impact on quality of care, as common standards and clinical protocols could hardly be adopted.

Table II-11: Registered physicians in the Beirut Order of Physicians by country of graduation (2001)

Graduation Country / Region	G.P. Graduation		Specialization	
	Number	Percentage	Number	Percentage
Lebanon	3386	38.95	1565	24.91
Eastern Europe	2596	29.85	1558	24.80
Western Europe	1428	16.42	2185	34.78
Arab Countries	1027	11.80	204	3.25
North America	41	0.48	683	10.87
Others	216	2.50	87	1.39
Total	**8694**	**100%**	**6282**	**100%**

Source: *Beirut Order of Physicians*

4.2 Dentists

The Order of Dentists was established in 1949, but was split in 1966 into two Orders similar to the Orders of Physicians. There are currently 3,611 dentists registered in the Order of Dentists of Lebanon, and another 450 registered in the Order of Dentists of North Lebanon.

Table II-12: Distribution of dentists by mohafazat in 1985, 1994 and 2000

	1985	1994		2000	
	%	Number	%	Number	%
Beirut	35	828	28.7	1045	25.7
Mount Lebanon	24	1331	46.2	1798	44.3
North Lebanon	12	270	9.4	450	11.1
South Lebanon	5	233	8.1	347	8.5
Bekaa	4	43	1.5	233	5.7
Unspecified	20	178	6.2	188	4.6
Total	**100**	**2883**	**100**	**4061**	**100%**

In 1994, Doughan and Doumit[11], reported a high concentration of dentists in Beirut and Mount Lebanon. This regional discrepancy still prevails as of 2000. It reflects the financial interests of dentists to be established in the more affluent regions of the country, especially since dental care does not have as extensive a coverage by funding agencies as medical care.

Graduates from universities in Lebanon made up 41% of the pool of dentists in 1994. The Saint Joseph University and the Lebanese University graduate each some 40 new dentists yearly, while graduates from abroad (mainly Eastern Europe, France and Arab countries) return to Lebanon at the rate of almost 150 every year.

Dentists face a similar situation as physicians in terms of oversupply and multiplicity of educational backgrounds.

Table II-13: Distribution of dentists by country of graduation (1994)

	Number	Percent
Lebanon	1181	41.0
Romania	426	14.8
Ex-USSR	382	13.3
France	194	6.7
Syria	167	5.8
Egypt	150	5.2

Bulgaria	103	3.6
Other countries	280	9.7
Total	2883	100

4.3 Pharmacists

The current number of registered pharmacists is 3457, and 1575 pharmacies are licensed by MOH (2002). Numbers of pharmacists and pharmacies have grown by 34.4% and 59.1% respectively between 1995 and 1999, and only by 5% and 12.4% between 1999 and 2002.

Table II-14: Evolution of the number of pharmacists and pharmacies (1995-1999)

	1995	1996	1997	1998	1999	Increase 95-99	
						Number	Percent
Pharmacies	**883**	**1008**	**1183**	**1315**	**1405**	**522**	**59.1**
Pharmacists	**2341**	**2577**	**2772**	**2979**	**3146**	**805**	**34.4**

Source: *Order of Pharmacists 2000*

Pharmacies are better distributed by mohafazat than physicians and dentists clinics. This is due to the 1994 Pharmacy Practice Law, which specifies that a minimum distance between pharmacies should be respected for new licenses. The distance is 200 meters in crowded cities and 300 meters in rural areas. The regulation led to lesser discrepancy in the distribution of pharmacies compared to that of pharmacists.

There are still a few illegal retail pharmaceutical outlets operating in the country, in spite of several crackdowns by MOH, which started in 1993 and have led to closing some 600 of those so far.

Table II-15: Pharmacists and pharmacies per 10000 inhabitants and distribution by mohafazat (October 2002)

	Pharmacists		Pharmacies		Drugstores	Agencies
	Number	‰	Number	‰		(importers)
Beirut	848	20.8	196	4.81	7	34
Mount Lebanon	1507	13.16	734	6.41	10	37
North Lebanon	364	5.41	239	3.56	6	4

South Lebanon	235	8.3	163	5.75	5	0
Nabatieh	101	4.91	83	4.04	0	0
Bekaa	249	6.22	164	4.10	2	0
Total	**3304**	**10.62**	**1579**	**5.07**	**30**	**75**

***Source**: - Pharmacy Department, MOH 2002 (Pharmacy data)*
- Population and Housing Survey 1996 (Population distribution)

4.4 Nurses and Paramedical Personnel

In 1997, there were 754 nurses graduates with a university degree, 437 nurses with a TS degree (Technique Superieur), 757 nurses with a BT degree (Baccalaureat Technique), and 1,505 nurse-aids, a total of 3,444 nursing personnel[12]. The ratio of qualified nurses to population is one to 1600 persons. This is one of the lowest ratios in the world, and is approximately one tenth of that typically found in developed countries and some third to half of that found in developing countries. The ratio of hospital beds to nurses is 4.5 beds per nurse, which compares with a ratio of between less than 1 to 2.5 beds per nurse in most Western European countries[13]. As a result of the nurses shortage, hiring of non-registered nurse "aids" has become quite common in most hospitals.

Since 1997, 453 nurses graduated from the Lebanese University, let alone other educational institutions, thus increasing the overall number of nurses. Table II-16 shows the numbers of nurses and other paramedical who graduated from the Lebanese University between 1997 and 2001.

In addition to Schools of Nursing at AUB and USJ, and the Public Health Faculty of the Lebanese University, the Balamand University has established lately an undergraduate nursing program. Nursing institutes exist all over the country to prepare technical nurses at the BT and TS levels. Other nursing programs are hospital-based.

Table II-16: Lebanese University: Public Health Faculty graduates (1997-2001)

	97-98	98-99	99-00	00-01	Total

Nursing	64	107	113	169	**453**
Medical Laboratory	56	68	72	74	**270**
Physiotherapy	49	59	51	39	**198**
Midwifery	35	42	43	63	**183**
Social Assistance	16	21	18	21	**76**
Orthophony	0	12	12	11	**35**
Ergotherapy	0	0	0	10	**10**
Public Health & Hosp. Adm.	25	0	14	29	**68**
Total	**245**	**309**	**323**	**416**	**1293**

The shortage of nurses results from the unattractive professional status on the one hand, and the short life career of nurses on the other. Many single nurses quit the profession after getting married.

Upgrading the financial and social status of nurses is needed to encourage enrollment in nursing schools. The improvement of working conditions is very important as well for career stability. For this purpose, much effort has been put to pass a law for the formation of an Order of Nurses in Lebanon (2002).

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