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WORLD HEALTH ORGANIZATION ORGANISATION MONDIALE DE LA SANTE

RECONSTRUCTION

OF THE

HEALTH SERVICES OF LEBANON

REPORT

OF THE WHO/LRCS HEALTH

ASSESSMENT AND PLANNING MISSION

6 February – 13 April 1983

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WHO/LRCS HEALTH ASSESSMENT AND PLANNING MISSION TO LEBANON

6 February - 13 April 1983

1. INTRODUCTION

1.1 PURPOSE OF THE ASSESSMENT AND PLANNING MISSION

In the wake of eight years of armed conflict in Lebanon, the Ministry of Health (MOH) of the Government of Lebanon requested the World Health Organization (WHO) to send a multidisciplinary health sector assessment and planning mission to Lebanon. The main task of the mission was to propose actions to be taken in 1983 - 1986 to reconstruct the health services sector of Lebanon and to improve the coverage and quality of health care throughout the country.

It was agreed that the mission would specifically:

(1) Describe the trends in the health sector, with emphasis on main areas of competence of the mission's members,

(2) Respond to a National Health Policy statement proposed in December 1982 by the Minister of Health, H. E. Dr Adnan Mroueh, and

(3) Develop a framework for planning and broad services programming in Lebanon's health sector, with recommendations as to actions to be taken in 1983-1986 in order to move ahead within that framework.

1.2 APPROACH OF THE MISSION

The mission was organized and supported by the WHO Regional Office for the Eastern Mediterranean (EMRO), the WHO Headquarters and the League of Red Cross Societies (LRCS), with on-site collaboration of the WHO Programme Coordinator in Lebanon. The mission's composition, the members' roles, and the national counterparts assigned to work with the mission are shown in Annex B.

Financial analyses, especially of the financial implications of changes proposed by the Ministry of Health, were prepared for the mission by USAID consultants Drs James Jeffers and Paul Zukin. Their report, which deals with health sector organization as well as finance, is presented in Annex D, and several sections of it are also incorporated in the present WHO/LRCS Report.

The mission worked in Lebanon from the 6th to the 26th of February, 1983. Its members met with the Minister and senior officials of the Ministry of Health, reviewed documents, conducted interviews, and visited health agencies and treatment facilities in Beirut and North and South Lebanon. Their annexed reports form the basis of this report. Annex C provides additional information on the mission's activities and on development of this report. A preliminary summary of the report was transmitted to the Ministry of Health in March 1983, while urgent recommendations were sent by cable early April. The framework of the proposed action planning and review process was developed in April 1983 with assistance from WHO headquarters.

1.3 ACKNOWLEDGEMENTS

The mission's work would have been impossible without the full collaboration of the Minister of Health, H.E. Dr Adnan Mroueh, many Lebanese officials, and the national counterparts (listed in Annex B) appointed to work with mission members.

Faculty members and graduate students of the Department of Health Sciences of the American University of Beirut, many of them members of advisory task forces appointed by the Minister of Health, collaborated with the Mission. They made available documents and information that they had collected and

organized. Dr Nabil Kronfol (Associate Professor and Chairman, Department of Health Services Administration, AUB, and Special Advisor to the Minister of Health), was the principal coordinator for the mission's interactions with the Ministry of Health, in addition to being a principal interpreter of the changes in health sector organization and finance proposed by the Minister.

Besides cooperation of officials of the various Lebanese agencies named in the body and annexes of this report, the mission benefited from the collaboration of various international agencies in Lebanon which shared their information, experience and views regarding the health sector. Special assistance was provided by Mr Guy van Dooselaere, Resident Representative, UNDP, and his staff, and by UNICEF and other UN agencies.

The mission benefited greatly from discussions with EMRO staff in Alexandria, Egypt, immediately after leaving Lebanon, and is also indebted to EMRO and WHO Headquarters for administrative support for developing the present Report.

1.4 STRUCTURE OF REPORT

This report contains the following major sections:

Section 1: Introduction

Section 2: Summary of the mission's findings, conclusions, and recommendations.

Section 3: Description of the current situation of the health sector.

Section 4: National health policy as proposed by the Ministry of Health.

Section 5: Detailed conclusions and recommendations by the mission.

Section 6: Action plan for implementation by the Government

The body of this report takes precedence over the annexed consultants' reports, which are provided in order to show in greater detail the information and analyses upon which the mission's overall report is based. References for the various areas covered in this report are found in the annexes, and acronyms used in both the report and the annexes are given in Annex A.

2. SUMMARY OF THIS REPORT

This Summary contains five sections: (2.1) Current Situation, (2.2) National Health Policy and Opportunity for Change, (2.3) Conclusions and Recommendations on Policy, (2.4) Conclusions and Recommendations on Programmes, and (2.5) Action Plan.

2.1 CURRENT SITUATION OF THE HEALTH SECTOR

After eight years of war, Lebanon's health sector needs to be rebuilt and re-established on a basis which will permit the Government to fulfill its commitment to the health and well being of its citizens.

At present, the organization, financing, and delivery of health services are fragmented and chaotic. The population has little confidence in Government health services. The Ministry of Health, weakened during the war years, has little capacity to deliver health services itself and sees two thirds of its budget paid to the private sector as uncontrolled reimbursement for private hospital services of uncertain quality and necessity. Other major parts of the health services system are out of the Government's control, resulting in problems such as rising health sector costs, illegal pharmacies, sale of unnaproved and counterfeit drugs, and lack of attention to first contact health services and continuity of care. There are shortages of nurses, of middle level health sector personnel, and of training facilities for them. Although there is already about one doctor for every 1 250 inhabitants and two long-established medical schools continue to train physicians for Lebanon's three million people, two unauthorized medical schools have also opened, and most newly licensed physicians are graduates of foreign schools, admitted to Lebanon without adequate determination of their competence. Most health sector resources are overly concentrated in Beirut.

2.2 NATIONAL HEALTH POLICY AND OPPORTUNITY FOR CHANGE

Lebanon's present national climate of hope, optimism, and expectation of change offers the country a unique opportunity to overcome many of her health sector problems. The Government's commitment to a new health policy, proposed by the Minister of Health in December 1982, will make it possible to seize that opportunity and meet a commitment to "provide personal and non-personal, curative and preventive, promotive and rehabilitative health services to the Lebanese population -- irrespective of one's ability to pay for such services."

In the same presentation, the Minister summarized a new health policy and some of the changes it implies for the health sector, focusing on establishment of "Area Health Authorities" (AHA), each of which would serve over 200 000 people:

> "This model calls for the pooling of all resources at the area as well as central levels.... interaction and partnership with the private sector institutions at all levels and wherever needed.... active participation and commitment of the community leaders - in the decision-making process - .... the ... Ministry of Health .... (would be) the primary and most important manager of health services in Lebanon and has the greatest authority and responsibility in the health care delivery system .... The implementation of these activities require extensive capital and recurring financing. ... The financing of the health services will be the responsibility of the National Social Security Fund, itself rejuvenated through a well conceived system of fair taxation and co-sharing mechanism, between the citizens of Lebanon, the employers, and the State."

Implementation of the new health policy will require reorganization of the health sector and of its financing, and a greatly strengthened Ministry of Health.

2.3 CONCLUSIONS AND RECOMMENDATIONS ON POLICY.

In response to its observations and to the proposed new National Health Policy, the Assessment Mission has developed a number of conclusions and recommendations for the following areas of Lebanon's health services delivery system. These are presented in detail in Section 5 of this report, and only briefly summarized here.

2.3.1 National Health Policy

The mission concluded that implementation of the National Health Policy proposed by the Minister of Health is feasible but that full implementation would require 10 to 15 years. The mission recommends that immediate steps be taken to begin to implement it, initially in Beirut, if Government fully and publicly backs it and reinforces the Ministry and its efforts to re-organize and re-build the health sector.

2.3.2 National Health Planning

The establishment of a National Health Planning Unit in the MOH will greatly strengthen the Government's ability to plan and carry out changes in the health sector, including those recommended by this mission. In order to carry out its functions of developing and analyzing information, reporting the results and their implications for and within national health policies and plans, developing and revising plans, assisting and monitoring their implementation, and making policy recommendations, the unit will need to include and have access to both technical planning experts and experienced operational and management personnel. The relationships which have now been established with the American University of Beirut, and the continued activity of the joint task forces appointed by the Minister, help assure that the needed human resources present in Lebanon will continue to be available and utilized. Outside technical advisors will also be available to the unit as needed. The Planning Unit should immediately begin national surveys of epidemiology; health knowledge, attitudes, and practices; health manpower; and hospitals. It should use early valid results of those surveys as partial bases for policy feedback and for development of national plans for health manpower development, epidemiological services, primary health care, a health center network, and hospital facilities.

2.3.3 Organization of the Health Sector

The health services delivery system is fragmented in a multiplicity of uncoordinated public and private agencies Legislation should be enacted (preferably by the end of emergency powers on 6 May 1983) to change the structure of the health sector by merging into the Ministry of Health the

health sections of the Ministry of Labor and Social Affairs and of the Ministry of the Interior. The Government should also mandate the establishment of autonomous local Area Health and Social Affairs Authorities (AHAs) to arrange for quality health care for all Lebanese. Implementation should begin in Beirut and include jurisdiction over hospitals and other health resources within each area. Government should place major emphasis in budgets and incentive systems on primary health care and on preventive programmes to meet the major needs of Lebanon's population.

2.3.4 Financing of the Health Sector

A national insurance financing mechanism for payment of medical services needs to be established which is standardized and uniform for the whole country and which is acceptable to the providers of services, the service users, and the payors of services. The Government should establish the legal and administrative structure for a "National Health Security System", by initially (a) consolidating all public sector health services cost reimbursements in one financing agency and (b) establishing a uniform fee schedule for health services. Each of these latter actions is also recommended in its own right. High level policy decisions will be needed to guide the work of experts developing detailed plans for the NHSS. Limits should soon be established on the amounts of Government funds available for reimbursement of private sector health care services, and the Government should establish, monitor, and enforce quality standards for all health services for which it pays.

2.3.5 Management Systems

Management systems from the central levels to the most peripheral levels through the proposed decentralized AHAs, need to be established or strengthened or reintroduced, and there is need to consider the relationships and interactions among those systems. Specific areas include personnel management, logistics, maintenance, information systems, financial systems, planning, and monitoring, quality assurance, and evaluation. Government must urgently develop and apply effective mechanisms to ensure adequate and acceptable performance, in accordance with clearly specified terms, by hospitals, physicians, and others employed or contracted to provide or manage health services.

2.3.6 Health Services Delivery in the Metropolitan Area of Greater Beirut

Government has greater contact with organizations and inhabitants in Beirut, which also contains a high proportion of the nation's population. Reorganizing and operating the coordinated health services in Greater Beirut would provide needed experience on which to base development of other AHA's elsewhere in Lebanon. A master plan for health services delivery in the metropolitan area of Greater Beirut is needed to provide a framework for orderly growth and rational expansion based on the population's health needs and to prevent uncontrolled and unbalanced growth.

2.4 CONCLUSIONS AND RECOMMENDATIONS ON PROGRAMMES

2.4.1 Health Manpower

There is no national health manpower plan, and health manpower and training are imbalanced in several ways. More physicians are not needed, but new (unauthorized) medical schools have begun to function. At the same time, there are shortages both of nurses and paramedical personnel and of training facilities for them. Health manpower is excessively concentrated in urban settings. The many foreign medical graduates are not trained for Lebanon, and the health training programmes in Lebanon are predominantly oriented to curative care and hospitals, not comprehensive health care. More training programs are needed soon for nurses and middle level health personnel. A national health manpower survey must be carried out as a basis for a national health manpower plan for all levels of health personnel, including physicians. A National Medical Council should be established, responsible for recognition of degrees, licensing examinations, licensing and registration of health professionals, monitoring the quality of care, applying the medical code of ethics, and determining the number of students who are to study medicine or other health professions. Position-specific management training of health services personnel must be provided. Health personnel training should be reoriented to help translate the new national health policy into reality, emphasizing primary health care, prevention, community and patient relations, and necessary management skills. Government health worker salaries need to be increased and tied to performance.

2.4.2 Preventive Programmes and Epidemiology Services

The Ministry of Health is responsible for preventive programmes which affect the population in general. Lack of basic health information poses a serious constraint in identifying health problems objectively and in setting priorities. There is need to have a capable central and provincial structure to direct, monitor and evaluate public health activities. Early action is necessary to re-establish epidemiological services to provide key information for decision making in health sector reconstruction. A national epidemiological survey of morbidity and ongoing epidemiological services (including surveillance) are needed as bases for health services plans and operations. The Directorate of Public Health must be reactivated and supported, under the leadership of an epidemiologist, and local public health programmes must be strengthened (including provision of experienced and responsible leadership at the provincial level and the re-training and in-service training of local health workers). An epidemiological and health KAP survey of clients and the general population should be carried out as one of the first steps toward strengthening first contact care (PHC).

2.4.3 Maternal and Child Health

The concepts of maternal and child health have long been known in Lebanon, but they are not well applied at present. Special attention must be paid to high risk groups such as pregnant women, infants, and pre-schoolers. The full range of immunizations (DTP, Polio, Measles) should be provided on a national basis, with adequate record maintenance. If poliomyelitis constitutes a threat, vaccination should at least be provided to all susceptibles in the focal areas of the disease. Growth charts should be reintroduced for the regular monitoring of growth and development, at least among small children. If satisfactory nutritional status among preschool children is confirmed, MCH programmes should be directed preferably to the mother and child up to 2 years of age and underfive clinics may be uneconomical. Traditional birth attendants should be integrated and retrained.

2.4.4 Primary Health Care

Attention to primary health care is important in reconstruction efforts, since the present system, created with little or no attention to first contact care, continuity of care, and other primary health care concepts, is collapsing under the financial strain of inappropriate use of hospitals and escalating medical care costs. Primary health care should form the basis for the health care system and should be given major emphasis by the Government of Lebanon in order to demonstrate its concern for the people's health and to make most effective use of health care resources. Primary health care (in the sense of first-contact care) in Lebanon must be provided in ways which meet the needs and the reasonable expectations of all the people. This may require that doctors and nurses based in health centres and in some hospitals provide such first contact preventive, promotive and curative care in all communities and with full support from the Government of Lebanon. A few health center based demonstration projects (in Beirut and elsewhere) should be established soon, to provide comprehensive PHC, with community participation, with continuity of care, and with adequate management, technical, and hospital support. These would provide experience on which to base further decisions and programs.

2.4.5 Health Facilities

There are major issues regarding possible increases in the number of Government hospital beds. The Government should develop a National Master Plan for Public and Private Hospital Facilities. That plan should be based on assessments of needs for hospital beds, on financial plans and projections, and on Government policy decisions regarding such matters as how to meet primary health care and outpatient service needs and what proportion and types of hospital beds and services should be provided through government facilities. Government decisions regarding further hospital development in Lebanon should not be made until a comprehensive study has been made covering the need for hospital treatment and for dispensaries and health centres. The investigation would have to consider plans for primary health care and hospital construction by private and voluntary sources.

Private hospitals play an important role in Lebanon. It is in the "voluntary" private sector that the country's major hospital care takes place. In 1982 the MOH utilized and paid for approximately 1 184 beds per day in the private sector. The government pays for some 40 000 acute care hospitalizations per year in the private sector. Government hospitals are out-dated, understaffed, and under-used, suffering the stigma of being places to go to only if the family cannot possibly pay. Only 690 public hospital beds are operational (and only 20 in Beirut), out of the existing total of 9 972 hospital beds for acute and chronically ill-patients, but there is the capacity to easily double the number of functioning MOH beds.

The Government needs to increase the benefits which it and patients receive from the very large amounts of funds paid to private sector hospitals through the MOH. The Government should use reimbursement for services provided as a means of expanding MOH control over private hospital beds, especially over the use and quality of the private sector hospital services for which it pays.

The mission's recommendations regarding construction and reconstruction of public hospitals are offered with the caveat that they should only be considered if needed improvements in organization and management seem very likely to take place, if problems of staffing and recurrent costs can be resolved, and if justified on the basis of results of a thorough survey/study of health facilities. If the Government's capacity to manage and utilize its own hospitals could be sufficiently strengthened, and if detailed analyses indicated that increasing public sector beds would be financially feasible and beneficial (as does not seem to be the case, in comparison with the alternative of increased control and improved selective use of the private sector), then the Government might consider increasing the number of beds in the public sector by: upgrading, equipping and staffing 580 existing but non-operational public hospital beds; installing a 200 bed temporary public hospital in Beirut; and constructing a new public hospital in Beirut with 300 beds, also to be used for training of nurses, paramedical, and public health staff, with emphasis on community health and primary health care. Those beds, added to the newly started renovation of the 200 bed Quarantina hospital in Beirut and the planned 130 bed temporary hospital in Saida, would raise the total national bed/population ratio to approximately 3.7 beds per 1 000 inhabitants.

2.4.6 Drugs and the Pharmaceutical System

The drug and pharmaceutical system is out of control of the Government. Illegal pharmacies are operating. Counterfeit, ineffective, and otherwise dangerous drugs are present on the market. Forceful actions are necessary in order for the Government to gain needed control over the drug sector, decrease the hazards which that sector now presents to the health of the people, increase the health benefits of money spent on drugs, and control rapidly rising drug costs. A strong national policy on drugs should be established. Drug and pharmacy sector legislation should be strengthened and enforced. Illegal pharmacies should be closed. Drug samples should be sent to recognized international drug testing laboratories (with plans to later establish a National Drug Quality Assurance Laboratory in Beirut). Ineffective and otherwise dangerous drugs must be controlled. The number of drugs on the market must be decreased, initially by forcing removal of unapproved drugs and inventorying and registering all drugs on the market in Lebanon, then by reviewing all drugs (including those previously approved and those newly submitted for approval) and allowing marketing only of those which are safe, effective, and needed (based on WHO list of essential drugs). The newly created National Office of Drugs needs sufficient authority, resources, and Government support to carry out its mandate. Studies on drug utilization should be done, and vital information about drug use should be distributed to providers of health services, patients, and the general public.

2.4.7 Emergency Medical Services

The metropolitan area of Beirut lacks a quality medical emergency care services network, and one should be implemented.

2.4.8 Blood Transfusion Services

There is a shortage of blood for transfusion in Lebanon, and transfusion services are fragmented and of uneven quality. A National Blood Transfusion Service, which should be established, incorporating the resources of the existing transfusion services, with the Lebanese Red Cross responsible for all operations. A national organizing committee should be appointed by the Minister of Health to plan and initiate that service.

2.4.9 Laboratories

Adequate health laboratory services, including regional laboratories, need to be developed, especially to support primaty health care and preventive services throughout Lebanon. An Advisory Committee for the Central Public Health Laboratories should be formed, to enable better coordination between the various sections of the laboratories.

2.5 ACTION PLAN

To gain the full benefit of the recommendations contained in this report, the Ministry of Health should direct the implementation of an action plan based on five parallel phases of work, as illustrated on page 15.

I. Enacting legislation. The purpose of the first phase is to enact the legislation required to implement the National Health Policy as proposed by the Ministry of Health. This legislation will include new measures as well as modification of existing regulations.

II. Formulating supporting policies. In the second phase, the Government will formulate and start implementing national policies in order to restructuré the health sector as decided by legislation. These policies will include guidelines concerning social, economic, financial, technical and administrative aspects of the National Health Policy.

III. Building resources and systems. The purpose of the third phase is to make the re-structured health sector operative, consistent with health and other national policies. To this end, the Ministry of Health will start mobilizing the human, financial and technical resources required to deliver the health services as well as re-building the necessary management and administrative systems.

IV. Implementing health programmes. In the fourth phase, the competent units of the national health delivery system will develop and implement programmes to meet specific needs of the population in Lebanon. Some of these programmes may initially be implemented on a pilot basis to gain experience for wider application at a later stage.

V. Monitoring progress. In the last phase, the Government and the Ministry of Health will monitor progress in implementing Phases I, II, III and IV and will evaluate the need for any corrective action.

These five phases of work provide a framework for action, by (a) setting the scene for the recommendations made by the Assessment and Planning Mission with emphasis on 1983-86, and (b) helping the Government to identify the need for action in addition to these recommendations. The National Health Planning Unit of the Ministry of Health should play a key role in facilitating the planning, coordination and monitoring of the five phases of work.

Specific action steps, together with responsibility and timing for each phase, are outlined tentatively in Section 6 of this report. The deadline of 6 May 1983 for the anticipated expiration of the Government's emergency powers is particularly relevant for several actions proposed in Phase I, Enacting Legislation.

If requested, WHO will be prepared to assist the Ministry of Health in implementing the five phases of the action plan. Appropriate areas of possible assistance include participation in progress reviews and training programmes, advice on technical issues and on the important role of the National Health Planning Unit, and refinement of the action planning and review process.

FIVE PARALLEL PHASES OF WORK PROVIDE A FRAMEWORK FOR ACTION ....

SUMMARY OF ACTION PLAN

(Illustrative - see details in Sections 6.1 to 6.5)

PHASES OF WORK	RESPONSIBILITY	TIMING				
		1983	1984	1985	1986	1992
I. Enacting legislation	Government					
II. Formulating supporting policies	Government and Ministry of Health					
III. Building resources and systems	Ministry of Health					
IV. Implementing health programmes	Ministry of Health					
V. Monitoring progress	Government and Ministry of Health					

3. THE CURRENT SITUATION OF THE HEALTH SECTOR

3.1 OVERVIEW OF THE HEALTH SERVICES SECTOR IN LEBANON

A relatively clear image of Lebanon's health sector problems emerged from this mission, in spite of inadequate and conflicting information. Physicians, hospitals, private services, and commercialism dominate the health sector in general. Public sector health organization and finances are chaotic. The weakened Ministry of Health plays a relatively minor role, with little coordination with other redundant public sector health bureaucracies. Over two thirds of the MOH budget (US$ 58.5 million MOH budget in 1982) flows to the private sector through uncontrolled reimbursement for private hospital services of uncertain quality and necessity. There are about 3.2 hospital beds (0.23 of them public) for every 1 000 persons, but there is little control of the quality of hospital and medical services, and many public and private hospital beds are unoccupied. The public complains of rapidly rising costs of hospitalization, medical care, and drugs, and counterfeit drugs and illegal pharmacies have appeared. There is about one doctor for every 1 250 inhabitants, but nurses and middle level technical personnel are scarce, and all health personnel are highly concentrated in Beirut. Health centers and small dispensaries are operated by the MOH and by other Government and private agencies, but few such centers exist in Beirut and referral arrangements are inadequate. Nowhere in Lebanon is there a health center which delivers a full range of essential primary health care services. Throughout the health sector, the Government has little ability to control quality and to enforce standards.

The damages and disruption caused by the drawn-out hostilities since 1975 and by the 1982 crisis have only exacerbated long-established problems, including uncontrolled reliance by the Government on (and payment for) private sector health services, to the detriment of development of effective public sector health services. The population is reported to have little confidence in the Government's health services at present and prefers to utilize the private sector. The Government now urgently needs to develop and improve its own health services, to improve its use of private sector health services, or preferably to do both.

3.2 AVAILABILITY AND QUALITY OF INFORMATION

Much of the basic information needed for planning, operating, and monitoring health services and facilities either is not available in Lebanon or is inadequate in coverage or quality.

3.2.1 Availability of epidemiological information

Epidemiological information provides the foundation upon which all other parts of the public health programme are constructed. Information on health problems affecting the population is a basic essential tool for effective health planning and programming. To be able to determine needs for facilities and services, it is necessary to measure the level of health of the population and to be able to answer the questions as to the main health problems, their magnitude, the groups affected, and when and where the problems occur with the greatest frequency. The value of measuring the level of health does not stop at the stage of planning for the provision of health services but goes beyond that to measuring the outcomes of the services and assessing their adequacy and efficiency.

The use of appropriate epidemiology is almost absent at the various levels of Government (and other) health services in Lebanon. The present fragmented private, curative health care system in Lebanon lacks the ability to provide relevant epidemiological information. At the local or community level, health personnel, especially doctors, rarely report diseases to the health department, although they are obliged to do so (for some diseases) by law. A similar situation exists with respect to health establishments such as clinics, dispensaries and hospitals. This has resulted in the present situation in which only scattered information is available to the health authorities.

There is a conspicuous absence of health records, and where available, they are often incomplete, whether clinic or home based. Maintenance of quality medical records is an essential part of medical care in general. The lack of good medical records is regrettable, among other reasons, because they would constitute an invaluable help in the collection of baseline and follow-up data on health and disease. Medical records and archival science work (for which UN assistance is available) is needed in Lebanon.

The department of vital and health statistics of the MOH has been non-functional and practically non-existent since 1975. This department produced annual reports for the years 1956 to 1971. At that time its role was only as a processor of information which in many instances was deficient both in its comprehensiveness and in its quality. The collected data were rarely, if ever, selected, collected, and processed to facilitate or improve decision making, and rarely led to any actions. Hence, the essential basis of epidemiological surveillance (namely information for action), was missing, and it continues to be missing now, to the detriment of effective health services.

At the central level of the MOH, there is an existing structure for epidemiological services, yet these services have been almost at a standstill for many years in view of various serious constraints. Central supervision over the minimal field activities is inadequate, as are the analysis, use, and feedback of available epidemiological data. Many of these functions are practically non-existent. Hence there are few or no possibilities for ensuring regular identification of critical situations such as outbreaks and epidemics or for ensuring appropriate and timely responses to them and to other changes in incidence or prevalence of diseases.

In the present situation all collected information is for use by higher level officials only. Health workers collecting the information do not take part in the analysis or the interpretation of the data and don't see how the data are used, so they do not feel the value and the need for accuracy and completeness. In addition, data analyses are not made against the essential local background in the community; i.e., data are not collected on local community variables influencing health, and comparisons are not made between national and local data.

In spite of the current lack of adequate epidemiological services in the Government, Lebanon is potentially capable of developing and implementing sound epidemiological work, and of establishing an adequate national epidemiological surveillance and analysis system. This is the case because of the presence of universities which have well-experienced groups in epidemiological training and in the use of epidemiology. Those groups have been able, in the midst of the most difficult situations, to implement pilot epidemiological surveillance activities which could with slight modification serve as models for future development of these services in the MOH.

The proposed general framework for a health information system for the MOH, developed by the MOH/AUB Task Force on Health Information, is a step forward in the development of epidemiological services at the central level. More thought needs to be given, however, to the local level as a source of information and to its potential in the interpretation and utilization of information. At the local level, where health workers are expected to help communities to solve their health problems, the application of basic epidemiological principles can be most helpful. Local health workers are most suited for this purpose as they are often in the best position to interpret the situation in the light of local realities. By bringing epidemiological principles to peripheral health care, new dimensions will be added to this important tool, and several benefits are envisaged (as noted in Annex H, Preventive and Epidemiological Services).

3.2.2 Availability of health services information

Very few official data have been collected over the course of the last eight years. While there are several fragmented small surveys and studies of various sectors of the health delivery system, undertaken principally by AUB professors and students, no comprehensive set of data exists. Many of the special studies yield contradictory results, and virtually all are incomplete. Rather fundamental data are lacking concerning rates of utilization, inpatient hospital admissions, outpatient visits, disease patterns and trends, causes of death, costs of services, etc. As a consequence, both the WHO/LRCS mission and the financial analysis team spent a great deal of time systematically collecting, interpreting, and reconciling rather basic data and information describing the general and financial characteristics of the health services delivery system.

3.3 HEALTH CONDITIONS

As a result of war, some risk factors such as disrupted sanitation, population movements, etc., are accumulating and can stress the health situation, especially in relation to communicable diseases outbreaks. However, as noted in section 3.2.1, population indices and disease incidence/prevalence data are lacking. It is nevertheless possible to give some estimates on the present

state of affairs by making cautious inferences from data collected in selected groups and from observations and interviews at public and private hospitals, dispensaries, and basic services centres.

Upper respiratory tract infections and diarrhoeal diseases head the list of causes of morbidity, as in many other countries. Infectious diseases are endemic and some vary among the various population groups in Lebanon. The incidence of skin infections is said to not have increased during the war to a visible extent, and they may even be less prevalent now than before the war.

Malnutrition is reported to be restricted to groups living in particularly difficult situations (e.g., refugees). Studies on growth and illness patterns of Lebanese children were initiated in 1960. Local growth standards for boys and girls 1-18 months of age were published in 1969. Local longitudinal health and growth data have been published, as have data on nutritional status classified according to weight/length. There seems to be a stable 5-10% of undernutrition (defined as low-weight and height for age) in children under five.

Various sources report a high incidence of mental retardation among children, with cases occurring in clusters and seemingly related to the mosaic of different ethnic origins and to consanguinous marriages in certain communities.

3.4 ORGANIZATION, EXPENDITURES, FINANCING, AND SERVICE STATISTICS OF THE HEALTH SECTOR

In many cases, data with which to describe the financial performance of the health care system in Lebanon either are not available or are of questionable accuracy. The finance study team's best estimates of expenditures of various health care providers, as well as out-of-pocket expenses by the population for medical services, are presented in this section.

Table 3.4A below provides a summary of financial and services characteristics of the major health care providers and financial intermediaries. Table 3.4B presents similar information concerning private health insurance. The salient features of medical services delivery and financing mechanisms are presented below.

3.4.1 Delivery and Financing of Public Sector Medical Services

3.4.1.1 The Ministry of Health (MOH). As shown in Table 3.4A, the MOH primarily serves 700,000 medically indigent, providing medical care in its own hospitals and outpatient facilities and reimbursing costs of services rendered in private hospitals. Roughly 77% of hospitalized patients (40,000 : 52,000) are treated in private facilities with which the Ministry has contracts. In 1982, the MOH had contracts for 1184 beds with private hospitals. Reimbursements were based on a MOH fee schedule (tariff) and were reimbursed at 85% of scheduled charges. The Ministry's 1982 budget amounted to LL 234.0 million and of this sum, LL 160.0 million were allocated for reimbursement of health services provided in the private sector.

3.4.1.2 Army and Public Security Forces. The military, including active duty army and public security forces and retired personnel, their dependents and civilian support staff, are provided care in military facilities or on a reimbursement-of-charges basis in private facilities. A total of 250,000 individuals are covered. Total expenditures are estimated at LL 75.0 million in 1982. Funds are directly allocated from the Ministry of Defence (MOD) to operate military health services and to reimburse private providers.

3.4.1.3 The National Social Security Fund (NSSF). The NSSF provides financial reimbursement for health care charges incurred by employees in the private sector, including autonomous organizations. In 1982, a total of 645,000 persons, comprised of 215,000 employees and 430,000 dependents, were covered. Funding comes from employers, employees and the MOF. By special law, the MOF is obligated to pay the NSSF an amount equal to 25% of NSSF payments for medical services rendered on behalf of beneficiaries. Care is provided in private health care facilities and reimbursement is based on a percentage of a NSSF fee schedule or tariff. Estimated expenditures in 1982 were LL 144.0 million. Total spending would have been LL 163.0 million if the NSSF had adopted the uniform tariff recently developed by the Task Force on Health Care Financing, MOH.

3.4.1.4 Office of Social Development (OSD). The OSD provides outpatient care to some 195,950 medically underserved individuals. The OSD spent LL 8.0 million for care in 1982. In 1983, it expects to spend LL 7.0 million for care in its own facilities and additional LL [illegible] million for care provided jointly with voluntary organizations.

3.4.1.5 Cooperative of Government Civil Servants (UGCS). The UGCS also provides financial reimbursement for care in private health facilities based on a percentage of total charges as established by its own individual fee schedule. Those covered include 47,000 GOL employees plus 173,000 dependents for a total of 220,000 persons. Funding comes from payroll tax assessments paid by employees and the national government. The tax assessment is 7% of total wages and salaries (excluding allowances), of which employees pay 1% and the State pays 6%. The 1982 estimate for health reimbursement expenditures is LL 50.0 million.

3.4.1.6 Municipalities. Municipalities (under the Ministry of the Interior) frequently provide outpatient care in dispensaries and health centers which they operate. In Beirut, the municipality estimates that it spent roughly LL 10.0 million for health services in 1982. A rough estimate of expenditures by all municipalities in Lebanon for health care in 1982 is LL 20.0 million.

3.4.2 Private Sector Health Insurance

In the private insurance sector, one finds both commercial health insurance (e.g., ALICO, the American Life Insurance Company) and health insurance offered their employees by employers who are self-insured (e.g., AUB). Table 3.4B below details the coverage, benefits and costs of health insurance provided by ALICO and AUB. No attempt was made to survey all private sector health insurance plans individually. The information presented concerning ALICO and AUB is illustrative of the types of private insurance plans that are in effect in Lebanon at the present time.

Private health insurance is not used extensively in Lebanon. In general, private health insurance is supplemental to public sector direct medical services delivery and reimburses the costs of services rendered by private providers. ALICO estimates that LL 5.0 million is spent annually in Lebanon for commercial health insurance covering 100,000 persons, primarily to supplement NSSF benefits. AUB spends LL 5.0 million each year providing coverage for some 13,000 students, faculty and other employees, including dependents.

Few firms provide medical care for employees in company dispensaries, without charge. Middle East Airlines (MEA), Lebanon's largest employer (with 5,000 employees) both provides this service and also pays the 15% of medical care charges not reimbursed by the NSSF. MEA estimates that it spent LL 1.0 million in 1982 for these benefits.

It is difficult to estimate the total spent on health care by private firms and other organizations in 1982. Including commercial health insurance, AUB and MEA, LL 11.0 million are accounted for. Doubling this figure to LL 22.0 million, we believe, gives a reasonable estimate of the total expenditures by private health insurance organizations in 1982.

3.4.3 Out-of-Pocket Expenditures

The last and a major source of health care financing in Lebanon is direct out-of-pocket expenditures for drugs, physicians and other health related costs by the consumer. No good data on which to base estimates of the magnitude of these expenditures are available. Drug costs (see discussion in section 3.8.2) constitute a major component of the costs of health care, particularly out-of-pocket expenditures.

An International Labor Organization (ILO) study estimated that Lebanon spent 6% of individual income on drugs and from 11% to 17% of income on health care all together. However, the portion of these expenditures that is directly out-of-pocket and that which is reimbursed by some type of insurance coverage has never been calculated. One could use the percentage of drug costs relative to "income" as a basis for estimating total expenditures on health services. However, the partial translation of the ILO study available to the health finance study team did not make it clear how "income" is defined (i.e., disposable, personal, etc.) and the original report was not available. Therefore, some basis other than percentages of income had to be used in order to estimate total outlays on health, including expenditures made out-of-pocket.

Based on discussions with people knowledgeable about Lebanon's health sector, we judge that at least as much is spent out-of-pocket at point of service as is paid for by all types of public sector reimbursement mechanism and by private insurance organizations, including firms that self-insure, plus the value of services directly provided by Government.

3.4.4 Total of Health Sector Expenditures in Lebanon in 1982

The health sector finance study team concluded that aggregate expenditures on medical services in Lebanon in 1982 were between LL 1.14 billion and LL 1.6 billion, probably nearer to the lower bound of this range. Total expenditures appear to be divided roughly equally between public and private sectors as sources of funds, and drug costs as a component of total health expenditures appear to range from 38% to 42% of total outlays on medical services.

Aggregating the expenditures for health from the various sources described in Sections 3.4.1 and 3.4.2 above yields a total of LL 551.0 million per year. This is shown as follows:

	LL Million
Ministry of Health	234
NSSF	144
UGCS	50
Military	75
OSD	8
Municipalities	20
Private Health Insurance	20
	551

Of these LL 551.0 million, the bulk of funds, possibly 98%, are spent on curative medical services, and 80% represents reimbursements to the private sector.

To the LL 551.0 million must be added at least an equal amount for out-of-pocket expenditures. This yields a total of LL 1.1 billion, as the lower bound of expenditures for health care in Lebanon estimated for 1982, or a per capita expenditure of LL 400, based on a resident population of 2.75 million.

This estimate was judged to be low by Lebanese health authorities whose best "guess" is about LL 1.6 billion. However, this last estimate is high by comparison with other estimates of aggregate outlays on medical services in Lebanon. One such estimate is based on village studies which show an average annual outlay per capita of LL 458, which when multiplied by 2.75 million persons estimated to be living in Lebanon in 1982 yields an aggregate estimate of total expenditures on medical services at LL 1.26 billion. A second estimate is based on family budget expenditure data collected in 1966, showing that on the average annual expenditures on medical services per capita in that year equaled LL 164.5. Assuming a 6% rate of compound growth in health outlays annually, per capita expenditures on medical services would have grown to LL 443 over the interval of years 1966 to 1983. Multiplying LL 443 times an estimated population of 2.75 million persons living in country in 1982 yields LL 1.22 billion as another estimate of aggregate outlays on medical services in Lebanon in that year.

3.4.5 Weaknesses in Financial Mechanisms

Weaknesses in the existing financial mechanisms are discussed under individual categories below.

3.4.5 1 Fragmentation Among Public Sector Agencies. Public sector direct provision of medical services and reimbursement of the costs of privately provided medical services is scattered among several different agencies which are in no way coordinated. The NSSF, UGCS, and the OSD are autonomous agencies under the tutelage of the MOLSA. Municipalities and the Military are under the control of the Ministries of the Interior and of Defence, respectively. Both the MOH and the Military reimburse the costs of private sector provided medical services, in addition to providing some services directly. The OSD supplies services directly (outpatient services only), while the UGCS and the NSSF are strict cost reimbursement agencies. The result is that different agencies, in principle, cover different but sometimes overlapping segments of the population, providing non-uniform benefits to beneficiaries who happen to be covered by respective agencies depending largely on their circumstances of employment.

Public agencies receive resources in a wide variety of ways: direct allocations from the MOF in the case of the MOH, ODS (MOLSA), and the MOD and wage and salary payroll tax assessments in the case of the UGCS and the NSSF. Yet the NSSF also receives part of its revenues (25% of annual medical care expenditures) directly from the MOF. There is no clear equity achieved in the case of benefits to beneficiaries who are covered, since each agency provides direct services or reimburses the costs of privately provided medical services according to its own tastes, individual capacity, and schedules, as the case may be.

Adding up the total population covered by the various public agencies, it appears that a maximum of 2.0 million persons are covered by public sector direct delivery of medical services or cost reimbursements, leaving 1.0 million persons medically disenfranchised.

Employee tax assessments range from zero in the case of the Military, through 1.5% of LL 750 monthly wages in the case of the NSSF, to a high of 1% of total wages in the case of members of the UGCS. Thus there is little reason to believe that equity exists on the revenue generation side either.

There would appear to be great advantages in adopting a uniform tariff or fee schedule on the part of public agencies, consolidating all or most of the public sector reimbursement activities into a single agency, and in providing for greater uniformity in employee contributions to public sector cost reimbursement. There also would appear to be merit in the MOH's recent proposal to absorb the direct medical services delivery activities of the OSD into MOH operations.

3.4.5.2 Absence of Cost Controls and Quality Assurance. Cost reimbursement invites various abuses, such as the oversupply of services, false billing, and charging over and above legal fee and service tariffs. In the present system, very little is done to enforce the legal tariffs adopted by each agency for fear that private providers would refuse to accept the agency's clients and would provide services to the clients of another agency or engage in strictly private practice.

Actually, before 1976, the GOL cost containment program was active and was believed to be reasonably effective. However, during eight years of war the public medical sector was hit hard and the private sector grew rapidly. Public agencies became increasingly weak due to war and political turmoil. This led to a decline in discipline and in effective administration of many Government programs, including those in the public medical sector. Now that the war is over, Government has the opportunity to regain momentum in administration and enforcement. However, the question is whether the Government will grasp this opportunity, and how best to do this.

Adoption of a uniform tariff for all public sector reimbursement agencies (such as the one recently developed by the Task Force on Health Care Financing, MOH) and consolidation of public sector cost reimbursement activities into a single responsible agency would facilitate enforcement of legal fees greatly. However, in addition to these things, Government must also develop the necessary data base and performance standards requisite to an effective program of cost containment that would improve the efficiency with which public funds are spent.

An aggressive program of cost containment would not only serve Government's interests in using public funds more efficiently, but would also facilitate Government's interests in supplying greater volumes of medical services through the public sector.

An effective cost containment program cannot be launched with out an equally strong program of quality assurance. If Government simply puts a lid or cap on costs and prices as the basis for its reimbursement activities, levels of private sector earnings can still raise, if the private medical sector reduces costs by means which also reduce quality of service, with obvious disadvantages for the welfare of patients. The quality of medical care in Lebanon is very uneven, and in some cases it is undoubtedly below minimum standards of acceptable medical practice.

Currently there are very few mechanisms in place to monitor the quality of care rendered in either the public or the private medical sectors. In the roughly 130 or so hospitals in Lebanon, only four tissue committees exist, and one of these was established only two years ago. There is no evidence of peer review or of objectively established and enforced utilization and medical practice and performance standards, outside of university hospitals and a handful of private voluntary hospitals. Medical audits are not regularly conducted outside of those institutions which accommodate teaching programs. Inspection and certification standards are very low and are not enforced consistently.

Under the circumstances cited in the paragraph immediately above, days of hospital care and visits to outpatient facilities and clinics could not possibly be reasonably comparable in terms of quality of care received, and thus reimbursement even according to a standard fee schedule could not be either wholly rational or equitable. The problems of lack of uniformity in the quality of care available and the general low level of quality of care in many cases will become greater as the trend toward foreign-trained physicians accelerates in the future, as predicted, without adequate means to assure the competence and good practice of physicians.

3.4.5.3 Low Salaries of Public Sector Health Personnel. In addition to a current lack of effectively operating government medical facilities, Government faces the problem of recruiting and retaining an effective and dedicated cadre of physicians and other health professionals to Government service. In order to do this, Government would have to provide a compensation that at the margin is equal or better than the levels of earnings available in the private medical sector. In the absence of an effective program of cost containment, there is no check on the rise in the levels of earnings in the private medical sector. Thus, Government will always be fighting a difficult, if not losing, battle in competing with the private medical sector for the services of health professionals, unless Government resorts to conscription or forced placement in government service upon graduation.

Table 3.4A · SUMMARY OF FINANCIAL AND SERVICE CHARACTERISTICS OF MAJOR HEALTH-RELATED ENTITIES *

ENTITY	FINANCING	THOSE SERVED - ELIGIBLES	SCOPE OF SERVICES & CLIENT PAYMENT	SERVICES UTILIZATION
Ministry of Health	1. Receives budget from Ministry of Finance, 1982 estimated total 234 million LL±. MOH collects no fees from patients. 2. Budget break down M.L.L a. "Chapter 1" reimbursement of pvt. providers 130+ b. "Chapter 2 - long-term care (Tbc, mental rehab.) in private facility. 20+ c. "Chapter 3" reimbursement for private lab., x-ray, dialysis, etc. 10+ 160+ d. Est. cost of MOH facilities for medical care 50 e. Est. cost for general admin. & P.H. 24 234 3. Average annual cost for those served: LL a. For private reimbursement 229 b. Add amount MOH pays for its own facilities serving an estimated 700,000 persons 71 Est. expenditure/beneficiary/year 300LL	1. Anyone not covered by other health service - basically the medically indigent, estimated at 700,000. 2. Where no other facility is available, anyone presenting for care is treated without question. 3. If patient unable to pay the 15% of tariff, MOH pays for them.	1. Provides services directly in its own facilities, without charge to patients. 2. Contracts with private hospitals + MDs and pays 85% of fee schedule. Patient pays 15% if able, up to 500 LL maximum. No outpatient benefits except lab, x-ray, dialysis, on referral from MOH OPD. 3. Covers out of Lebanon referral for medical care, 100% of costs including transport and attendant. 4. Categorial P.H. Services. 5. Covers services provided only in a 3rd class bed.	1. 1982 40,000 private hospitalizations 12,000 MOH facility hospitalizations. 120,000 out patient visits. (source, DG, MOH, 2/12/83).

*Tables 3.4A and 3.4B are taken from Tables 3.2.1 and 3.3.1 of Jeffers, J., and Zukin, P., Lebanon Health Sector Financing: Issues, Problems and Recommendations. March, 1983

Table 3.4A (Continued)

Army, Security Forces	1. Entirely funded by GOL through Ministry of Defense. 2. No budget estimate but in 1982 55 million LL spent on reimbursement of private sector care. This equaled 80% of services provided, hence total expenses estimated at 75 million LL; and estimated 15 M.LL for drugs. Est. expenditure/beneficiary /year. =300LL =======	1. Active duty military, security forces amounting to 35-40 thousand plus retirees and dependents. 2. Civilian employees, numbering estimated 35,000. 3. Total number covered 250,000.	1. 2 military hospitals, damaged and only partially operational. 2. Contract out to private facilities. 3. Active duty and dependents covered 100% 4. Civilian employees covered 75% of costs of services.	1. No information
National Social Security Fund	1. Financed by an amount equal to 7% of payroll, up to 1st LL750 /month, 1.5% from employee 5.5% from employer. 2. GOL, Min. of Finance, gives NSSF an amount equal to 25% of expenditures for medical care annually. 3. Total estimated expenditure for 1982 is 144 M.LL. This equates to 223 LL per beneficiary. 4. Total out of pocket for 15% not reimbursed by the fund amounts to approx. 25 M.LL However, in fact it is believed beneficiaries pay more than this because reportedly some providers charge more than the authorized tariff.	1. Employees in private industry industry - from one employee, up. 2. Foreign workers whose countries cover Lebanese workers in their country. 3. Total covered in 1982, 645,000 (215,000 employees insureds plus 430,000 dependents).	1. Covers all services provided under fixed schedule (tariff) of fees; NSSF paying 85% of these fees and the client 15%, for in-patient care and 70% and 30% respectively, for out patient care. 2. Provider bills the NSSF directly collects the consumer portion from the consumer. 3. Fund does not operate any medical care facilities at this time but has a linkage to the Batroun hospital which operates as an autonomous entity. 4. Covers only 3rd class changes in hospital, but client can pay difference for higher class bed. 5. Patients may be referred out of Lebanon for care not available in the country.	1. All those covered have similar benefits. 2. Because of delays in processing claims, some providers are reluctant to cover services involving small amounts of money e.g., under 100LL.

Table 3.4A (Continued)

Office of Social Development	1. Health services financed from Min. Labor & Social Affairs directly in some medical-social centers, and in others, cost sharing with voluntary organizations. Total funding is budgeted at 10 M.LL for 1983, as follows: 7 M.LL to cover health services for 113,250 in medical-social centers entirely subsidized by ODS and 3 M.LL for 113 smaller medical-social centers jointly funded with voluntary agencies serving 81,700. Total number served equal 194,950; average expenditure equal 10 M.LL/194,950 or 51.3 LL per beneficiary. 2. Total collected from beneficiaries unknown. 3. Total spending in 1982 was 8 M.LL.	1. OSD attempts to fill the gaps for social services and MCH care. Operates in in rural areas and under served beneficiaries. 2. Total served in 82 was 194,950.	1. Provides mainly curative MCH services - mid-wives, care of children some immunizations and health education through medical-social 2. Client pays 5 LL per center visit. Total collected in unknown but maximum would not exceed 194,950 x 5 LL or around 1 Million LL. 3. OSD is developing expanded centers including delivery of maternity cases and broader health care.	1. Degree to which OSD services are utilized by under served population has not been established.
Mutuelle - Cooperative of Civil Servants, (UGCS).	1. Financed by contribution from civil servants and the Lebanese government. Funds go to the Cooperative of Civil Servants to cover various benefits. 1982, of a total budget of 75 M.LL, 50 M.LL went for health benefits. This equates to 50 M.LL/220,000 = 221 LL per beneficiary.	1. Employees and their dependents are covered equally. Civil Servants number 47,000 and dependents 173,000, for a total of 220,000 eligibles.	1. Provides health and death benefits and rewards for births and marriages.	1. Break down of served utilization by beneficiaries not available from visit to Mutuelle. (UGCS)

Table 3.4A (Continued)

Mutuelle Coopera-tive of Civil Servants, (UGCS) (Cont'd.)			2. Health benefits vary with employees rank. Benefits are cash payments for health care based on a relative value scale which the Mutuelle has established. This scale has varied from that used by the MOH and NSSF for reimbursement in the past. Drug costs are partially reimbursed. Lowest rank employee treated in 3rd class; higher rank gets 1.6 x 3rd class reimbursement amount and can use 2nd class bed; highest rank reimbursement is 2.3 x 3rd class bed care. 3. Employee pays 1% of full payroll amount and government 6% of payroll. 4. Beneficiary may be referred out of Lebanon for medical care not available in country.	
Munici-palities	1. Municipality health services are under the jurisdiction of the Ministry of the Interior. 2. Many municipalities operate dispensaries which provide services to municipal employees and their depen-dents and to the general public.	1. Municipal employees and dependents. 2. Exact population coverage is unknown.	1. Outpatient services usually are rendered free to municipal employees and their dependents. 2. A charge (nominal) is often required for services rendered on behalf of the general public. Exact fees and fee revenues are unknown.	1. The City of Beirut spent roughly LL 10.0 million in 1982. 2. Spending on the part of all other municipal health facilities is estimated at LL 10.0 million in 1982.

Table 3.4B
PRIVATE HEALTH INSURANCE IN LEBANON *

ENTITY	REMARKS	THOSE COVERED	SCHEDULE OF BENEFITS	COSTS
AMERICAN UNIVERSITY OF BEIRUT HEALTH INSURANCE PLAN	1. Plan is self insured by AUB and provides both hospitalization and ambulatory care. Plan is called the HIP	1. Students and AUB employees - faculty and staff are covered, including dependents, according to the payment of premiums based upon the class of service and number of dependents.	1. Subscribers are entitled to inpatient and outpatient care of the AUH, with certain exclusives - eye glasses, blood, infusions, some drugs and ambulance service. Pre-existing health problems may be excluded, hospital benefits, i.e., number of days per year, increase with length of employment.	1. Premiums are generally collected monthly from employees or in advance from students.
	2. Number currently covered is 13003. This includes students, faculty members and employees. Close to 100% of eligible sign up for the HIP.	2. Distribution of subscribers by class of bed: HIP / HIP + NSSF / TOTAL 1st class: 1,016 / 559 / 1,575 2nd class: 5,672* / 1,558 / 7,230 3rd class: 147 / 418 / 565 Total: 6,835 / 2,535 / 9,370 * includes 4247 students.	2. Faculty and key staff are generally treated in 1st class accomodations, students in second class and lower level workers in third class.	2. On an annual basis, the following is the schedule premiums as of March, 1982: 1st Class — HIP / HIP/NSSF Subscriber: 960 / 708 Couple: 1,644 / 1,248 Cpl + 1 child: 2,112 / 1,608 Cpl + 2 or more children: 2,568 / 1,944 2nd Class Subscriber: 708 / 372 Couple: 1,248 / 648 Cpl + 1 child: 1,608 / 840 Cpl + 2 or more children: 1,944 / 1,008 Third Class Subscriber: 480 / 216 Couple: 876 / 384 Cpl + 1 child: 1,092 / 420 Cpl + 2 or more children: 1,356 / 588
	3. The AUB Hospital Insurance Plan has two general plans - one for subscribers not covered by NSSF and another which serves to supplement benefits under NSSF. Benefits under both plans cover identical services. The difference is the premium charged and the class of service.	3. The total of subscribers plus dependents is 13,003.		Total premiums paid in 1982 were 4 million LL. This equates to 308 LL per insured/year. In 1982 total costs were 5 million LL. This deficit was funded by the University.

*Tables 3.4A and 3.4B are taken from Tables 3.2.1 and 3.3.1 of Jeffers, J., and Zukin P., Lebanon Health Sector Financing: Issues, Problems and Recommendations, March, 1983.

Table 3.4B (Continued)

PRIVATE HEALTH INSURANCE IN LEBANON

ENTITY	REMARKS	THOSE COVERED	SCHEDULE OF BENEFITS	COSTS
COMMERCIAL INSURANCE-AMERICAN LIFE INSURANCE COMPANY (ALIC)	1. Generally sold to groups in commercial organizations. Minimum group is 10 employees. 2. Health insurance is generally sold only as an add on to life insurance. 3. ALIC estimates it has 20,000 employees covered by health insurance and that this constitutes half of the commercial health insurance in Lebanon. Total number of coverage is estimated at 40,000 employees plus 60,000 dependents or 100,000 individuals. 4. Percentage of firms with fifty employees or more which make commercial health insurance available to their employees is small - at most ten percent. 5. As seen from the schedule of benefits, catastrophic illness coverage is minimal. 6. Employers may pay for some or all of employees insurance costs as a fringe benefit.	1. Employees and eligible dependents of firms with contracts with ALIC. 2. Covers employee and only immediate family-spouse and dependent children. 3. Employees and dependents have identical coverage.	1. ALIC sells two plans. These have identical benefit categories but differ in the maximum paid per category. 2. Both plans are expected to be used in conjuction with NSSF. 3. Both plans offer Medical Assistance Insurance (MAI) and Supplemental Major Medical Insurance (SMMI) MAI has no deductibles and no co-payment or co-insured provisions. It pays immediately for hospital services (only) up to the Plan's limits. These are 3,700 LL for Plan B and 6,200 LL for Plan A. SMMI may be purchased alone or in conjuction with MAI. If brought alone there is an deductible of 4500 LL. MAI covers this deductible; however there is a 20% co-payment or co-insurance charge to the insured. Both plans have maximum life time benefits of 50,000 LL and vary in the daily hospital room reimbursement - 160 LL for Plan B and 250 LL for Plan A. For an additional "load" of 20% on the premiums, out patient visits are also covered and their cost subtracted against the life time maximum.	1. Total annual premiums for commercial health insurance in Lebanon are estimated by ALIC as around 5 million LL. This equates to 50LL/per insured/year. 2. Premiums are collected monthly; annualized they are as follows: Plan B - Low Coverage Employee Only LL / Employee & family LL MAI 288 / 1,008 SMMI 72 / 192 SMMI & Out-Pt. 86 / 230 Plan A - High Coverage MAI 432 / 1,560 SMMI 144 / 240 SMMI & Out-Pt. 173 / 288 (Note that any number of family members are included in one flat premium rate)

3.5 HEALTH SERVICES FACILITIES

A balanced and coordinated approach to the development of health facilities is needed, including hospitals and other types of health facilities (e.g., health centres) in both public and private sectors. A national master plan for development of health services facilities is needed in Lebanon, with mechanisms to encourage and reward compliance with that plan.

This section deals principally with hospitals, because of the Government's greater interest in hospital development, because of the great costs involved in their construction and especially in their operations, and because more data are available regarding hospitals than regarding other health facilities, and because major policy decisions regarding expansion of Government (MOH) hospitals are under discussion. This is not to deny the importance of health centres and of primary health care, as emphasized in Annex G.

3.5.1 Health centres and dispensaries

Accurate data on dispensaries and health centres in Lebanon, including the actual number that are functioning, the levels of services offered, their coverage and impact,and the types and number of staff, are unavailable. Nor is there data on the health and disease problems and needs in the country. The lack of a health plan or policy has meant that many dispensaries have been set up for business and/or political reasons rather than on the basis of the needs of the population. Most care provided at dispensaries is free or fees of up to 5 Lebanese Pounds are charged.

Table 3.5.1A shows the total number of dispensaries in Lebanon by Mohafazat (region), with the population distribution. Of these 507 dispensaries, 59.2% are located in apartments, with the remaining 40.8% in separate buildings. More than 80% of the total number of the dispensaries occupy an area of less than 150 square meters. The table also shows that Beirut, despite having the highest population, has the least number of dispensaries.

Table 3.5.1A Dispensaries in Lebanon and the Population Distribution by Mohafazat.

Mohafazat	Number	Percentage	Population Distribution
Beirut	48	9.5	45%
North Lebanon	61	12	16%
Beqa'	78	15.4	10%
South Lebanon	133	26.2	12%
Mount Lebanon	187	36.9	17%
Total	507	100%	100%

(Ref. AUB Study 1982, Dr Kronfol) (Ref. MOH, 1982)

Dispensary personnel (see Table 3.5B) are predominantly physicians, as was noted in a study of 268 of the 507 dispensaries. There are more physicians than nurses, and almost equal numbers of ancillary staff (such as cleaners, drivers etc.) to nurses. There is an average of seven workers per dispensary.

Table 3.5B Personnel Employed in 268 Dispensaries

Category	Number
Physicians	831
Nurses and midwives	534
Social worker	41
Pharmacists	12
Other	497
Total	1915

(Ref. AUB Study 1982 - Dr Kronfol)

Nearly all dispensaries, especially those in the rural areas, are said to offer mostly curative care. This is partly a reflection on the lack of a health policy at central level. It also reflects the fact that the core curricula of most doctors and nurses are not oriented to community health, so that the importance of a preventive health approach is not appreciated.

Funding of these same 268 dispensaries is from a variety of sources but the Ministry of Health and the Office of Social Development provide 47% of their total budget (Table 3.5C).

Table 3.5C Funding of Dispensaries.

Source	Percentage
Office of Social Development	26.2
Ministry of Health	21.3
Political parties	13.8
Red Cross	13.8
Mouvement Social	11.4
Voluntary organizations	4.9
Municipality	4.4
Community	1.0
International agencies	1.0
Others	1.0
Total	100%

(Ref. AUB Study 1982- Dr Kronfol)

3.5.2 Actual hospital bed supply

Based on available information, the WHO team considers that the tables below approximately indicate the distribution of general hospitals and functioning acute general hospital beds in Lebanon, by Mohafazat, as of February, 1983. The figures are those given by the Ministry of Health and the private hospital syndicate.

BEDS (+/-5%) BY MOHAFAZAT

	BEIRUT	MT.LEBANON	NORTH	SOUTH	BEKAA	TOTAL
PRIVATE	2119	1663	784	824	324	5714
PUBLIC	20	160	130	170	210	690
TOTAL	2139	1823	914	994	534	6404

HOSPITALS BY MOHAFAZAT:

	BEIRUT	M.LEBANON	NORTH	SOUTH	BEKAA	TOTAL
PRIVATE	22	23	15	15	6	81
PUBLIC	1	4	3	5	4	17

Annex Table E-6 lists private sector general hospitals, with the number of beds for each, by three major categories of general hospitals: university hospitals (total of 721 beds); hospitals belonging to religious communities and categorized as "non-profit" (1 777 beds); and "for profit" private hospitals (3 390 beds).

In addition to the 6404 acute general hospital beds shown above, there are approximately 3368 beds in private hospitals for chronically ill patients, out of which the Ministry of Health uses approximately 2500 under contracts. This makes a total of 9772 hospital beds in Lebanon. With an estimated population of 3 million in Lebanon, this gives a rate of 3.2 beds per 1 000 inhabitants. (Rates for some other countries are: Jordan 0.8; Iran 1.8; Iraq 1.9; Saudi Arabia 1.3; Syria 1.1; Libya 4; Kuwait 4; Yugoslavia 6; Greece 6; France 10.)

The Government does not own long term care facilities, but pays to bed patients in private long term care facilities:

Mental illness	4 institutions, totalling	1 305 beds
T.B.	3 institutions, totalling	235 beds
Chronic illness	10 institutions, totalling	1 695 beds
Rehabilitation	7 institutions, totalling	183 beds

3.5.3 Public hospital beds potentially available or now being added

The number of MOH general acute care hospital beds in service could be approximately doubled relatively quickly and at relatively low cost. In existing public hospitals in Lebanon there are, according to a survey made by AUB public health students in February 1982, 580 acute care general hospital beds which potentially could be renovated, upgraded, equipped, staffed, and put to use in a relatively short time.

Several hospital construction projects are also either underway or about to begin.

- At the Karantina Hospital in Beirut, construction work has just started for an additional 200 beds.
- In Saida a prefabricated hospital with 130 beds is apparently to be set up in the near future.
- In Baabda (in Greater Beirut) there is an incomplete building for a 500 bed hospital.

3.5.4 Determination of hospital bed needs

Available information does not permit accurate assessment of the present supply of hospital beds, of absolute needs for beds, or of priorities which should be followed if additional beds or hospitals were to be added to the overall hospital system. Epidemiological surveys are needed in order to determine the needs for hospital care and for other types of health care, based on identified health problems. Other studies are needed in order to determine with greater accuracy the present supply of hospitals and other health services facilities (e.g., health centers), their condition, and their acceptance and use by the people. Surveys and studies of the people's health knowledge, attitudes, and practices are also required in order to determine where they prefer to seek health care, under what conditions, and what factors determine their use of various private and public facilities and services.

Given the paucity of available information, discussions of general hospital bed requirements are sometimes based on some assumed "standard" ratio of beds to population. For example, at three beds per 1 000 population, Lebanon would "need" 9 000 beds to serve 3 000 000 persons. Estimates of additional beds needed are then made by subtracting an estimate of the total available bed supply from the assumed required ratio or number. Such methods too often involve unreasonable assumptions. Examination of the hospital care situation reveals that any addition of beds to the present system at public expense (directly or indirectly, including donor contributions or loans which could be used for other purposes) would need to be carefully justified in terms of issues such as:

- Extent and appropriateness of utilization of existing bed capacity
- Ability to staff and maintain facilities
- Ability to meet operating and recurrent costs of facilities (usually from 30% to 50% annually of a hospital's initial costs)
- Priority of specific additions relative to other potential additions
- Priority of added beds over other investments of health sector resources which might have greater impact on health (e.g., PHC or prevention)
- Types of beds to be added (acute care or long term, etc.)

The National Health Planning Office in the MOH will need to consider all of these factors in formulating a national plan for health facilities and their development. Certain additions of hospital beds, difficult to justify in the light of these factors, might be justified as necessary parts of pilot or demonstration projects designed to obtain maximum health impact with available health sector resources (through, for example, AHA development or support for PHC).

Some of the factors listed above are briefly discussed in the following paragraphs, and financial implications of adding MOH beds are analyzed in Section 3.5.5.

3.5.4.1 Hospital Occupancy Rates. Available information does not permit accurate assessment of the occupancy rates, but it is usually stated that private hospitals have an average occupancy rate around 60% while the public hospitals (with the disadvantages of a social stigma, poorer management, etc.) have an average occupancy rate below 50%. For many reasons (highly centralized and poor management, lack of or delay of supplies, lack of control of the staff performance, unclear financing, etc,), there is a lack of public confidence in public hospital services.

3.5.4.2 Quality of hospital care. Quality of care in public hospitals was difficult to assess under the conditions prevailing at the time of the mission, because of war damage, continuing disruption of the system (e.g., absence of some staff members), etc. The general opinion among the public and health care providers in Lebanon is that MOH hospitals do not offer high quality services. Members of the WHO/LRCS mission found that the few selected "private" hospitals which they visited (actually predominantly nonprofit hospitals belonging to religious groups; see Annex Table E-3 for examples) appeared to be well-run. No more general statement can be made regarding the operations or quality of care of the several categories of "private" hospitals, because few data are available and a considerable number of visits would be necessary. It appears that there is a considerable difference between some of these hospitals run by private doctors for profit and those run under either charitable status or a Board of Management of trustee status; those in the latter category include centres of excellence in which the effective major hospital work of the country is done, including medical training of doctors and nurses.

3.5.4.3 Needs for long term hospital care. Needs for psychiatric beds and for long term care facilities in general are very dependent on social mechanisms (family care, professional care at home, day care, home visitors, non-medical institutions, etc.) for dealing with mental and long term illness. The only long term care facility visited by members of the mission was the excellent 1 100 bed private mental hospital, the psychiatric director of which suggested that additional psychiatric beds are needed nationwide. Long term care must be included in the development of both immediate and long range plans for the health sector. This WHO report, however, concentrates on general, acute care hospital beds, in view of the scarcity of available data regarding needs for long term care.

3.5.5 Analysis of some financial implications of adding (3 000) MOH beds

The Ministry of Health has the responsibility for providing hospital care for all citizens who do not participate in one of the health insurance schemes (NSSA, civil servants, mutuelle, military). At present approximately 35% of the population are not covered by public or private insurance. For a variety of reasons (wartime security measures, lack of public facilities, etc.), the Ministry of Public Health has authorized reimbursement of treatment for many patients (deemed eligible for free treatment in MOH hospitals) in private hospitals. Data for 1982 indicate that approximately 70,000 patients (acute and long term treatment) received private hospital treatment at public expense in that year.

With eighty percent of public sector revenues spent on reimbursing the costs of private medical sector provided medical services, the MOH resents its reimbursement role and feels in a weak position relative to the private medical sector. The MOH recognizes that it currently has little capacity to deliver services directly, due to lack of resources, facilities and personnel, and that its administrative capacity is weak. The private medical sector is rich and powerful in terms of facilities and personnel, and has a favorable public image. The Government public health sector is stigmatized as capable of producing only low quality medical services, if services can be provided at all. Thus the private medical sector is in a position virtually to dictate costs, prices and qualities of services, and other terms on which it will provide medical services on behalf of Government. Those terms cannot be presumed to coincide with the collective interest of the Lebanese people. The Government health establishment is frustrated and would like to increase its strength vis a vis the private medical sector.

Government also feels that it must make a visible, perhaps dramatic, effort to directly provide a larger volume of medical services to the people than it currently provides, to demonstrate its active concern for the people's health and to maintain and increase its credibility.

Given these Government interests, the MOH places major emphasis on expanding the number of public hospital beds. Public hospitals are highly visible and are viewed by the MOH as "temples or palaces" of compassion for the people, thus serving to demonstrate Government's commitment to improving the general welfare.

However, the MOH also aggressively attempts to justify the expansion of the number of public hospital beds on economic grounds. The MOH insists that it can provide a quality of hospital services that is equal to that provided by the private medical sector, and that the MOH can do so at lower costs than those currently reimbursed per day of hospital service to private hospitals on behalf of MOH patients. MOH officials consistently state that increasing the number of public hospital beds is necessary in order to provide effective competition between the public and private medical sectors, resulting in higher quality and lower costs per unit of hospital services provided by the private hospital sector. MOH officials asert that effective competition between the public and private hospital sector requires that 40% to 60% of the total number of short-term general acute-care hospitals be public. The total number of existing public, short-term acute-care hospital beds, if they were fully operational, is around 1200, while the total of existing private beds of this sort number roughly 5,200, yielding a total of 6,400. In order for the MOH to have 40% of hospital beds, which in its view is necessary to provide effective competition, the MOH would need approximately 3000 additional public hospital beds.

$$\frac{1,200 + 3,000 \times 100}{6,400 + 3,000} = \frac{4,200 \times 100}{9,400} = 44.7\%$$

The problems of constructing, staffing, managing, and financing the operation of an additional 3000 public hospital beds in Lebanon are enormous. Construction and management problems aside, staffing and finding sources of funds with which to finance operations are most critical in view of Government's limited fiscal capacities (see Annex D, section 2.1) and the current low level wages and salaries existing throughout the Lebanese civil service. However, the MOH has several ideas (discussed in Annex D, Section 3.7) as to how surmount staffing and operating cost financing problems; these include implementing the 1978 Autonomous Hospital Act which, among other things, would allow public hospitals to compensate professional and non-professional staff in ways not allowed by the civil service regulations and to accept purely private, as well as public, patients.

Ultimately, the issue concerning the desirability or undesirability of expanding the number of public hospital beds rests on considerations of strict medical necessity and need, and the economic justification for doing so. The economic issues regarding the construction of 3000, or even any, new public sector hospital beds are explored in the report of the health sector finance team (Annex D, Section 3.8). The crux of the issue is whether or not the GOL can afford to construct and operate a larger number of public sector hospitals. Many alternatives to a massive expansion of the number of public sector hospitals exist. Some of these include an aggressive program involving construction of several health centers with limited numbers of inpatient beds, aggressive regulation of the private medical sector to make it behave responsibly in terms of quality of care provided and costs; the fostering of private sector initiatives aimed at quality improvement and cost reduction; and leave in private sector health facilities to fill gaps in the system, while at the same time regulating it to behave responsibly in terms of quality of services provided and prices charged to consumers. In making public policy decisions, cost effectiveness (obtaining the desired outcome at least expenditures of public funds) must be a major ingredient in the decision making process. Time and space did not permit the health sector finance team to cost out all the options available. However, it was possible to analyze some of the critical assumptions and implications of the MOH contemplated policy of greatly expanding the public hospital sector.

The crux of the MOH's proposed economic justification for expanding the number of public hospital beds is its belief that a patient day of hospital care can be provided at a cost of LL 200 in a public hospital, while the MOH on the average is currently reimbursing the private hospital sector LL 300 per day of hospital care. In short, the MOH believes that if it had beds, it could save LL 100 per patient day of care. Yet, if professional services costs were eventually to be equalized, how could there be a difference between per day costs in public and private hospitals? The answer is that either the private sector is "cheating" or that some element of cost has been left out of the public hospital per patient day cost. We believe that both cases are likely to be true. However, to the extent that the dfiferences lies mainly on the side of private sector abuse, the solution is regulation and better enforcement, not construction of additional public hospital beds. Thus attention is focused on missing elements of costs.

From discussions with MOH officials it is clear that little attention is paid to costs of general medical administration, maintenance, and hospital costs. This is understandable. It is inconceivable that the LL 200 per patient day figure as the cost of a day in a public hospital could include an appropriate allowance for general medical administration, maintenance, and replacement costs of capital. The analysis assumes that the stated LL 200 public sector cost per patient day includes an allowance for general medical administration and maintenance, which are very likely to be small by comparison with capital replacement costs. MOH officials admitted that capital replacement costs were not taken into account. This analysis, therefore, focuses on taking into account the major cost implications of making an appropriate allowance for capital replacement.

Note that the higher the occupancy, the greater the number of patient days, and the higher are total operating costs relative to the capital costs of the facility. The maximum R/D ratio for any given hospital, costs per unit of service remaining constant, is reached at 100% occupancy.

Making allowance for capital replacement, the central questions on which analysis must shed light are the following:

- At what level of occupancy would public hospitals have to operate in order to be able to compete with average private hospital sector per patient day costs of LL 300?
- What would be the implications for public sector reimbursement, if the government were to build and operate 3000 new beds?
- What would it cost Government to construct 3000 new public sector beds and what would it cost to operate them annually?

The analysis uses a cost of LL 440,000 ($110,000) as a reasonable estimate of the current per bed cost of a medium technology public sector permanent hospital in Lebanon, and assumes that each bed is available 365 days of the year. (Thus, 3000 new beds potentially could provide a total of 1,095,000 bed days of service annually.)

Since economies of scale in the rendering of medical services often are largely absent in a given facility, it also assume that recurrent medical costs of service are LL 200 per patient day and remain constant regardless of

level of occupancy. Average length of stay (ALOS) is assumed to be 6.0 days, roughly the same as in the private hospital sector in Lebanon presently. Capital replacement costs are assumed to increase at a rate of 10% compounded annually. However, public hospitals are assumed to collect revenues and invest them at 15% compounded annually, so as to be able to replace capital stock over a 20 year period. (This is a very conservative assumption that is highly in favor of the MOH's case that it somehow can provide services more cheaply than the private sector).

Calculations were made using both zero and 10% inflation rates annually compounded with respect to all elements of costs other than capital replacement costs; the results presented here are for the zero rate, but Annex N gives results for both rates.

Assuming that hospital bed capital replacement costs increase at 10% compounded annually, the replacement cost of a bed increases from LL 440,000 ($110,000) to LL 3.0 million ($740,000) in 20 years. However, since replacement funds are assumed to be invested at 15% compounded annually, it is necessary to set aside and invest only LL 28,893 ($7,224) annually per bed in order to provide for replacement at the end of 20 years. This LL 28,893 represents an amortized annual capital replacement cost that must be covered by annual revenues. When divided by annual patient days, which depend on the level of occupancy, the resulting figure represents an amortized capital cost per patient day. Total operating costs per patient day in this analysis represent the sum of recurrent medical costs and amortized capital costs per patient day. (Recurrent medical costs, amortized capital costs and total operating costs per patient day are presented in Table 3.8.2.1 in Annex D, by selected levels of occupancy rates.)

The answer to the first question posed (as shown in Annex D, Table 3.8.2.1) above is that in order for the MOH to replace its capital stock at the end of 20 years and to produce patient care at an average cost of LL 300 per patient day, public hospitals on the average would have to be 80% occupied. The MOH could produce patient services at a cost below what it is currently reimbursing private hospitals, LL 300, only if it were able to achieve an occupancy rate above 80%. In the years prior to the war, MOH hospitals averaged only about 40% occupancy (See Section 2.3). Thus, given the stigma currently attached to public hospitals, it would be very difficult for the MOH to boost public

hospital occupancy rates to level of 80% or beyond in the near future. Evidence that is available suggests that even private hospitals, on the average, are achieving only 60% occupancy. (If private sector hospitals' costs were identical to those used above for the public sector hospitals, operating at only 60% occupancy and receiving on the average only LL 300 per patient day would imply losing money at the rate of LL 34 per patient day. It is possible that most private sector hospitals earn sufficiently higher rates on private patients to cover losses on public patients. Capital replacement for private hospitals voluntary may be accomplished through charitable contributions at some point in the future. Other private hospitals probably place little or no concern on capital replacement, and hence underestimate their total operating costs.)

To determine the implications of the construction and oepration of 3000 additional public hospital beds for private sector reimbursement, we have to determine the impact of public hospital bed expansion on private sector admissions, patient days, occupancy rates and costs per patient days. If we assume that the total demand for hospital services remains in constant (see discussion in Annex D) and that operating costs are the same in both the private an public medical sectors, and if public hospitals (including the 3,000 proposed additional beds) achieved an average occupancy rate of 80%, then public hospitals will provide 876,000 patient days of service per year, and private sector patient days of service would decline from 1,138,800 to 262,800 (1,138,000 - 876,000). This would imply a private hospital sector occupancy rate of roughly 14% (262,800 : 1,898,000). Only a very large increase in overall demand for hospital services could maintain even the already relatively low private sector occupancy rate at 60%.

At 14% occupancy, private sector hospital patient day costs would exceed LL 600. If private hospitals costs are actually higher than those assumed for the MOH in this analysis (as the MOH contends), reimbursement per day of patient care in the private sector would also be higher. Thus the answer to the second question posed above is clear: <u>if the MOH were to build 3000 more beds, the private hospital sector may well cease to exist, unless public sector reimbursement agencies were willing, at least, to double the rate of reimbursement paid per patient day of private hospital service.</u>

(The answer to the third question posed above in this section, concerning what it would cost to build and operate 3000 additional public hospital beds, depends upon occupancy rates and other factors and is presented in tabular form in Annex D, assuming that the total initial costs of constructing 3000 new beds would be LL 1.32 billion (LL 440,000 x 3000) and that roughly LL 87.0 million must be set aside and invested annually for capital replacement (LL 28,893 x 3000).

3.6 MANPOWER AND TRAINING

Health manpower and training in Lebanon are imbalanced in several ways. There is no evidence that more physicians are needed, but new (unauthorized) medical schools have begun to function. At the same time, there are shortages both of nurses and paramedical personnel and of training facilities for them.

3.6.1 Health Personnel

Lebanon has no comprehensive plan for health manpower development. The information base required for adequate health manpower planning is lacking, and the data available are deficient. Data on various categories of manpower and on their numbers and distribution are incomplete, sometimes fragmentary and not analyzed. The lack of accurate and reliable information jeopardizes the efforts to formulate, implement and evaluate health and manpower plans. However, until an effective health information system is developed, the basic information currently available (if properly compiled and used) could justify some immediate action on priority problems that need urgent attention. Recently the Minister of Health appointed several task forces to study various aspects of the health system. The data given below and in Annex F (Health Manpower and Training in Lebanon) were obtained from the reports of these task forces and during the mission's visits to health agencies and facilities.

In 1980 there were 2 404 practicing physicians in the country, out of a total number of 3 383 physicians registered in Lebanon. Of the remaining registered physicians, 252 were known to be residing permanently overseas and 727 could not be traced to their known addresses. It was suggested that a number of the latter group were living temporarily outside Lebanon. Considering the estimated population of Lebanon (3 000 000), the number of practicing physicians provides for a reasonable physician: population ratio (1[:]1 248) compared to other neighbouring and developing countries. However, the health care services are characterized by geographic maldistribution of physicians, as can be seen from Annex Table F-1. The physician:population ratio in Beirut is three times higher than in the other areas of Lebanon, with one physician per 525 persons in Beirut. The majority of physicians work in the private sector, and of those who work with the Ministry of Health, approximately half do so on a part-time basis (Annex Table F-2). A large proportion of practicing physicians (58%) are specialists.

About 52% of all physicians registered between 1930-1980 graduated from medical schools outside Lebanon. In recent years there has been a steady increase in the number of registered physicians graduating overseas, with a peak of 76% in 1979-80. Annex Table F-3 shows the origins of the diplomas of 852 Lebanese physicians registered by the MOH during 1971-1977. All physicians must apply for and pass an examination (colloquium), organized by the Ministry of Health, before they are licensed to practice in Lebanon and are registered.

By contrast to physicians, there is marked shortage of nurses and other allied health personnel. (Annex Table F-4).

3.6.2 Health personnel training institutions

The main health personnel training institutions in Lebanon are shown in Annex Table F-5.

There are two well established medical schools, one at the American University of Beirut (AUB) and the other at St. Joseph University. Both are private institutions more than a century old. At present AUB admits about 86 medical students per year and the St. Joseph University admits 110. The

mission was informed that two new private medical schools, recently started and not officially recognized, are now training students in the premedical stage. With the establishment of these new medical schools and the return of increasing numbers of Lebanese medical graduates from abroad, the numbers of physicians would exceed the health needs of Lebanon and create serious problems. Medical education is expensive, and the need for its expansion should be carefully studied on the basis of the country's health development plan.

There are ten nursing schools, of which three (AUB, St. Joseph University, and Lebanese University) offer training at the Bachelor Degree level. The rest train nurses to the technical baccalaureate level. The AUB Faculty of Nursing also offers an Associate Degree in nursing (2 years) which does not fit with the Lebanese legislation which stipulates that only two types of nurses are recognized, BS and Technical Baccalaureate. In 1981 the total numbers of graduates from all nursing programmes was 285. It is important to note that all the nursing schools except for two are located in Beirut and belong to the private sector.

There are 498 nursing aides in hospitals and health centres throughout the country. There is no specific educational requirement for their recruitment. They are attached to hospitals for in-service training.

There is one school for training sanitarians in the country. The training is conventional and the graduates' role is limited to inspection of housing, food stores and restaurants and to enforcement of legislation.

There are now efforts by voluntary organizations to initiate some projects for training of village health workers, in collaboration with the Ministry of Health. Plans for training village health workers on an experimental basis in Saida have been developed but not implemented.

The Faculty of Health Sciences of the American University of Beirut provides training at the Bachelor Degree level (B.S.) in environmental health, biostatistics, and medical laboratory technology. The curriculum of the B.S. programme is under review and it is planned to provide for a core course during the first 1 1/2 years of the programme, to be followed by

1 1/2 years in the specific field of study. Consideration is also being given to the introduction of two new programmes, one in health education and the other in administration. The Faculty of Health Sciences also offers training at the Masters level in epidemiology and in general public health, as well as in health and hospital administration. The Master in Public Health can be taken with emphasis on hospital administration and for physicians with experience takes nine months. The Ministry of Health has so far not taken advantage of these training facilities for training its staff. Presently, no training in occupational health exists or is planned.

There is need to strengthen public health teaching programmes and to ensure their comprehensive coverage of the various basic disciplines. The contents of training are to be related to the tasks envisaged for the particular category of health workers. However, a minimum need will be that all health workers acquire the basic principles of public health and particularly (given the need for better information and for an epidemiological approach to decision making) ability to make observations and to record, count, classify and present their data. In-service training should prepare all present health workers for their roles in a strengthened health services system, including an adequate health information system, through organized courses, training manuals, and regular supportive supervision by the central and regional staff.

3.7 HEALTH SERVICES DELIVERY: SPECIFIC TYPES OF SERVICES

Lebanon's health sector is overwhelmingly oriented toward curative care in all of its aspects: financial, facilities, personnel, training and services. This section summarizes the mission's findings regarding four important areas of health services: Primary Health Care, Maternal and Child Health, Immunizations and Other Preventive Services, and Emergency Medical Services. The section's emphasis is on prevention.

3.7.1 Primary health care

The primary health care approach is not new to Lebanon. Law number 16352, passed in 1964, described how Lebanon was to be divided into four 'polar

centres' of health and included detail on the hospital, health centres and community activities. In 1980 a further law was passed to set up health centres across Lebanon. However, various political, economic, planning, and management difficulties have hindered putting these laws into effect, to the extent that there is not one health centre in the country that delivers comprehensive primary health services. Also, to many people in Lebanon primary health care means primary medical care mainly available from hospitals and dispensaries, whereas the emphasis, adapted to factors within Lebanon, should be on the provision of front-line, first contact services and on continuity of care (referral system). Primary health care should be developed within the framework of five basic principles: equitable distribution, community involvement, focus on prevention, a multi-sectoral approach, and appropriate technology. Within the framework of these principles, the basic components of a primary health care service are :

- Education about diseases, health problems, and their control
- Safe water and sanitation systems
- Maternal and child care, including family planning
- Immunization
- Appropriate treatment of common diseases and injuries
- Provision of essential drugs
- Promotion of proper nutrition

While there is a dense network of dispensaries (see section 3.5.1), the type of services delivered in them is governed by priorities set by the providers and therefore may not be in accord with the needs of the consumers.

3.7.2 Maternal and child health care

MCH services are provided in various settings (hospitals, dispensaries, basic services units, and by private practitioners). They are usually of a curative nature.

The predominance of curative over preventive services is alarming.

Patterns of treatment reflect linear cause/effect thinking with regard to health and disease. In line with such thinking, drugs are thought by many to be the answer to most health problems, and drugs are prescribed in an

indiscriminate and excessive way. (For example, oral rehydration mixtures seem to be readily available and are given to children suffering from diarrhoeal disease, but unfortunately antibiotics and anti-diarrhoeal agents are often prescribed concomitantly. The hazards related to the administration of antidiarrhoeal agents, especially when coupled with antibiotics such as sulfonamides and/or neomycin, are described in many medical textbooks.)

The lack of regular and appropriate supplies of drugs/equipment in peripheral centres is obvious. These issues are clearly related to the lack of managerial and administrative skills and to lack of coherent directives at more central levels.

3.7.3 Immunizations and other preventive services

Immunization coverage varies greatly from community to community. Most health workers contacted believe that no more than 40-60% of susceptible subjects are protected. Coverage, however, has been much higher where concerted immunization campaigns have been conducted. It is striking that, despite low immunization levels and despite the disruption of communities and medico-social services for them, infectious diseases among children do not seem to be a major health problem so far. It would be wrong, however, to believe that no vaccinations are needed as long as there are no signs of acute illness. Sporadic cases of poliomyelitis for example, should alert the responsible authorities and lead to preventive action and there are anecdotal reports of isolated cases of poliomyelities.

According to the organigram of the MOH, preventive and promotive health services at the peripheral level are the responsibility of the Qadaa medical officers and the health workers. Unfortunately the Qadaa medical officers are almost totally occupied with the provision of curative services in their districts. The number of health workers who are actually engaged in peripheral health services is very small. Their job descriptions are vague and they have little, if any, impact. This rather weak peripheral structure is reflected all through the preventive and promotive activities of the MOH.

Public health activities in Lebanon, and especially preventive and epidemiological services (as noted in Annex H), are rather marginal. They are not given the priority they deserve.

Given inadequate epidemiological information and surveillance, there are few or no possibilities for ensuring regular identification of unusual situations such as outbreaks and epidemics or for ensuring appropriate and timely responses to those and other changes in the incidence and prevalence of disease.

3.7.4 Emergency Medical Services

Public emergency medical services are below standard and there is no coherent system at present. The pre-hospital phase is characterized by a lack of coordination of services, virtual non-existence of services in some sectors, an uneven coverage (urban versus rural), and limited training of necessary health manpower. The in-hospital phase shows major deficiencies. Emergency rooms, where they exist, are poorly staffed and inadequately equipped. Most physicians have received no formal training in emergency medical care. The majority of Lebanese hospital emergency departments do not have 24 hour medical coverage. The majority of nurses, paramedical and allied health personnel have received no formal training in basic or advanced life support. The organization of emergency facilities, if and where present, does not meet the basic function of a hospital emergency department.

Because of the disruption of the war and the extremely unsettled conditions, there has been a great deal of neglect of the maintenance of skills of medical personnel delivering first aid and emergency services as well as of the physical facilities themselves. Several groups, both public and private, are involved in pre-hospital first aid activities. Public assistance is provided by some municipalities, but they do not have specialized personnel and their ambulances often are mere "camionettes a sirène". The task of the civil defense is to deal with the direct effects of the physical events, i.e., to obtain access to injured subject(s). The main feature of their services is an apparently poor cost/effect relation. While the budget allocated to them by the Ministry of Interior has been

steadily growing, the maintenance and timely provision of their materials and equipment seem to be unsatisfactory. Training of manpower is episodic and non-professional. Fire brigades respond only to selective calls (e.g., drowning, fires, and accidents). The Ministry of Health has been running a "secours-routiers" service but this has dilapidated gradually over the past years and some branches are said to have become subject more and more to political instigations.

Within the private sector some hospitals provide emergency care of variable quality and at high costs to consumers and to contractors such as the MOH. The "équipes actives secourists" of the Lebanese Red Cross (LRC) have been operating in a reliable, continuous and enthusiastic way throughout all those past troubled years. However, their services are based on volunteers, training is on the level of first aid only, and governmental financial support is meager.

The Government of Lebanon has ordered a task force to make plans for a comprehensive EMS programme for Lebanon and to study, recommend and implement means to upgrade hospital emergency departments in government hospitals as part of the overall EMS plan. In 1982 the EMS Committee completed an extensive review of 12 government hospitals, including a review of supplies and equipment available, of staffing and training completed, and of capabilities to provide prompt, efficient emergency care.

Since a 1979 visit of a US team of EMS experts, there have been several meetings in Lebanon and the U.S. regarding projects for strengthening MOH hospital emergency departments and EMS training and manpower development in Lebanon. While the strategy of putting the project into action has been changed several times in the light of security problems and hostile conflict situations, the overall objectives have remained the same:

- Upgrade the hospital emergency departments of government hospitals to a level compatible with the needs of the Lebanese population, principally those in the lower socio-economic level.
- Implement an in-hospital training programme.
- Implement a pre-hospital training programme.
- Establish and improve management and administration of hospital emergency departments in line with overall EMS system development.
- Develop criteria for EMS personnel certification.
- Upgrade the knowledge and skills of physicians in the urgent care of critical patients.

The EMS Committee will work under the auspices of either the CDR or the Minister of Health.

3.8 Support systems

Section 3.8 presents a brief overview of general needs for management support for health services, then describes the situation and needs in three specific areas of support: Drug Supplies, Transfusion Services, and Laboratory Services.

3.8.1 Overview of management support systems. Management support systems, from the central levels to the most peripheral levels, appear inadequate to provide needed support to health services, either at present or with the proposed improvements in those health services. The proposed decentralized AHAs will need much more effective support than the MOH currently provides to its facilities and personnel, and much more effective support than the current MOH systems are probably capable of providing without substantial changes. Effective management support systems will need to be established or strengthened or reintroduced. One of the current problems seems to be that there are, in effect, situations which encourage health services providers to not seek to have support services and management support systems functioning well. Members of the mission were told several times that health services workers routinely provide services in non-public facilities which are not available in public facilities because of equipment breakdowns, and that this decreases their interest in equipment repair to such an extent that they do not press for such repairs and may sometimes even sabotage public equipment by removing parts. Similar situations are said to exist in other areas of support.

Strong, effective management systems are needed in all of the following areas:

- Personnel Management: need assessment, position descriptions, recruiting, testing, selection, career planning, promotion, and dismissal.

- Logistics: procurement, warehousing, and distribution of supplies and materials.

- Maintenance: preventive maintenance, repair, and upkeep of equipment, vehicles, and buildings.

- Information systems: collection, organization, and reporting of information for planning and management decision-making.
- Financial systems: budgetary, accounting, billing, collection, expensing.
- Planning.
- Monitoring, quality assurance, and evaluation.

Some of these systems are covered in various sections of this report and its annexes and in several areas of the mission's recommendations, but there is a definite need to specifically consider the relationships and interactions among them and to establish systems for dealing with both routine work and routine problems in each area, as opposed to only initiating special efforts which will deal with the currently most salient problems. Management systems and routines should be developed which will enable the workers and managers available within the health services to deal with most problems in accordance with standardized procedures. This "management by exception" would free the leaders and higher level managers of the health services to focus on the innovations, improvements, and non-routine problems which really require their full abilities. It would also make the functioning of the system less dependent on individual personalities, and. with an adequate information system it would permit monitoring of performance, recognition of unusual situations, and early responses to needs for special actions or for changes in the system.

3.8.2 Specific support systems: Drug supplies

The drug regulatory and drug inspection services in Lebanon are a responsibility of the Department of Pharmacy within the Ministry of Health. The public, the health professions, and the Government are verv concerned about current problems in the pharmaceutical sector, including high costs, uncertain quality, the presence of illegal (unauthorized) pharmacies, and the sale of counterfeit or otherwise dangerous or ineffective drugs. There is also professional concern regarding the excessively large number of drugs on the market and the relative lack of Government control of the entire situation.

3.8.2.1 Drug expenditures. Drug costs constitute a major component of the costs of health care, particularly out-of-pocket expenditures. An International Labor Organization (ILO) study on health care costs estimated that expenditures on drugs represent 42% of total expenditures on medical care in Lebanon and 6% of individual income. Most recent figures on the reimbursement for charges for drugs paid by the NSSF amount to 55% of total outpatient charge reimbursement (LL 253 / LL 462) and 12% of reimbursement of inpatient charges (LL 34 / LL 283). These figures are based on average per insured costs on an annual basis. The composite or weighted average for reimbursement of drug charges in 38.7%. This figure corresponds closely with the 42% reported in the ILO study.

3.8.2.2 Drug Legislation. There is legislation on all aspects of pharmaceutical import, manufacturing, sales, price fixation, and drug inspection. However, these laws were formulated around 1950 and most officials felt that the laws need revision, strengthening, and updating.

3.8.2.3 Number of pharmacists, pharmacies (legal and illegal), and pharmaceutical importers, agents and manufacturing firms in Lebanon. In Lebanon there are 1125 pharmacists, 616 pharmacies, 95 importers of finished product drugs, 7 manufacturing units, and a handful of importers of generic drugs. Of the 616 pharmacies, 296 are legally licensed pharmacies, while there are 320 "illegal" pharmacies. "Illegal" pharmacies are those pharmacies that started selling drugs after 1954 when no more licenses were given by the Government. These started to function without licenses and are "illegal" for several reasons. One reason mentioned was that the present law specifies a distance to be maintained between pharmacies, and these pharmacies do not maintain this distance and are therefore illegal. The Government is not clear as to what can be done to these pharmacies now. Since some are long-established and may be meeting a need, it will be difficult to close them down, and efforts probably will be made first to allow them to comply with laws and become legally authorized pharmacies.

3.8.2.4 Number of Drugs on the Market. The exact number of drug entities available on the market in Lebanon is perhaps around 6,000, but this is a guesswork figure. The actual figure is not known. The American University of Beirut has a drug formulary that runs to about 2,000 preparations. When the last index of registered drug entities on the market was compiled in 1970, the number appeared to be around 2,000. The number of drugs used by the private sector is definitely excessive. Some persons in the field put the number as high as 16,000 preparation, while still others say it is between 8,000 and 12,000. This does not include many types of drugs from many different sources, entering the country during and after the war as aid. The Government is very interested making an inventory of all drugs on the market and a plan has been prepared for making one and publishing the results (as a computer printout). There is an immediate need for such an inventory if reduction in the number of drugs to be used in the country and preparation of lists of essential drugs for different levels of health care (including primary health care) can only be carried out after Government knows how many drugs are on the market. Drugs beyond the 2,000 number in 1970, which are not registered, would need to be registered after an inventory had been made.

3.8.2.5 Manufacturing firms. Of the 17 manufacturing firms, two have very good facilities. These are the Middle East Pharmaceutical and Industrial Company, S.A.L., (which formulates a wide range of Ciba Geigy drugs) and Frost and Company (which produces a range of Merck, Sharpe and Dohme products). Both these manufacturing units also have a large range of their own products. The mission's pharmaceutical expert visited one of these and was impressed by the quality control facilities available, the tests being carried out, and the calibre of the personnel. The second is said to be similar. However, it is said that standards of production and quality control are not the same in the other fifteen manufacturing units, which are much smaller.

3.8.2.6 Registration of New Drugs. The Committee for Registration of New Drugs, which is responsible for approving registration of new drugs in Lebanon, includes the Director General of the Ministry of Health, the Chief of Inspection of the Ministry of Health, representatives of the Order of Physicians and the Order of Pharmacists, and one other Ministry of Health official. A licensed agent or pharmacist may apply to register a new drug in Lebanon, using a form entitled "Information and Documents demanded from foreign manufacturers of pharmaceutical specialities". A drug not being marketed or approved for use in its country of origin is not considered further for registration in Lebanon. A non-refundable fee of Ten Pounds has to be paid by the agent when requesting registration of the drug. If the Pharmacy Department authorities or the Committee for Registration of Drugs wants the sample analyzed in a laboratory approved by the committee, the agent has to pay for the analysis, with laboratory reports sent to the agent. The criteria adopted by the committee for considering whether the drug should be registered in Lebanon are:

(a) Safety of the drug
(b) Efficacy of the drug
(c) Whether the drug is released in the country of origin, and
(d) Whether there is need for another drug of that type in the country

The committee is attempting to keep to a minimum the new drugs that are registered; since 1981, the committee has allowed registration of only 40 drugs. If the committee is unable to decide on the advisability of registering a particular drug, expert opinion is sought from the American University of Beirut or Hotel Dieu experts.

3.8.2.7 Import of generic drugs. Import of generic drugs is usually in response to tender enquiries. For the last two years importers have had to show drug control authorities a certificate from the official authority in the country of production indicating that the Government confirms that the generic drug has been produced according to the good manufacturing practices code. This is in accordance with the WHO Certification Scheme. Unfortunately, prior to two years ago the Government allowed importers to import generic drugs without showing this certificate. Authorities feel that this may have allowed many generic drugs of a substandard quality to be brought into the country and sold under false brand names.

3.8.2.8 Sale of Illegal Drugs on the Market. The Government and the public are seriously concerned about illegal drugs being sold on the market, and Government has requested assistance in overcoming this problem. Discussion with persons involved in control, import, manufacture

and selling of drugs indicates that illegal drugs find their way onto the market in several ways. Some drugs, often of inferior quality and perhaps past the expiry date, are smuggled into the country and find their way into pharmacies. Substandard drugs may also be produced in areas not totally under drug inspection control of the Government and marketed. Some generic drugs are imported, put into cartons of reputed brands names (also illegally produced), and marketed. Several measures could help combat illegal drugs, such as providing facilities or services to the Ministry of Health for testing the quality of drugs; strengthening the inspectorate of the Ministry of Health; and amending, strengthening, and enforcing the existing drug legislation. Since two months ago, the Inspection Visit has tried to insist that all drugs exhibit a label which indicates the batch number, date of expiry and the price for the public. All drugs not exhibiting this label would render the pharmacist liable to prosection. Strictly enforcing this rule would improve the situation.

3.8.2.9 Purchase and Distribution of Drugs for the Public Hospitals. The Central Stores Depot procures, by asking for yearly tenders, drugs that are then stored in the Central Drug Stores (one Chief Pharmacist supported by eight others) and distributed to the Government hospitals in the country. Site visits to the Government hospitals indicated that, in general, there were adequate numbers and types of drugs. There were, of course, instances of unusually long delays in replenishment of the drugs, but given the present conditions it is surprising that things were not worse. The stores procure about two entities (which are very close to the WHO List of Essential Drugs) by generic names and then supply these to the public sector hospitals. Personnel at the stores and at the hospital dispensaries say that drugs not being utilized before their expiry dates is not a significant problem.

3.8.2.10 Inspection of drugs and pharmacies. The Chief of the Drug Inspectorate Section of the Department of Pharmacy is assisted by eleven inspectors. This unit is responsible for ensuring that no illegal or substandard drugs are sold on the market and that proper pharmaceutical practices are observed by importers and retailers. The same group is responsible for inspection of pharmacies. Inspectors visit each of the legal pharmacies every two months, checking presence of pharmacists; expiry dates of drugs; examination of all drugs sold (e.g., is the drug registered, does it have a batch number, how does the quality appear on visual examination, the carton, etc.), and storage facilities (especially storage of perishable items such as insulin, vaccines, and I.V. solutions). The shelf life of powdered milk and baby food is also checked. Samples of drugs suspected to be illegal are taken for analysis, but lack of adequate facilities for quality testing of drugs is said to act as a brake to inspection activities. It may be that a drug entity is all right but the packing is false. In these cases, the pharmacist is held responsible. If the drugs has been imported by an importer, he and the pharmacist who sells the drugs are held responsible. If the importer denies importing the drugs, then the pharmacist is held solely responsible.

3.8.2.11 Lack of Drug Testing Laboratory The committee members and the Director-General of the MOH consider not having any Drug Quality Assurance Laboratory in the country to be a great handicap and request assistance in that area. Very few samples of drugs can be analyzed at the Drug Laboratories Section of the Central Public Health Laboratories in the range of tests required. The Head of the Pharmacy Inspection Services

noted that samples which his unit suspects are substandard or illegal (i.e., not registered, substandard, or illegally presented under a false brand label) cannot be tested in Lebanon or outside the country for lack of funds for outside testing; this hampered his unit's programme of work in attempting to ensure the safety and efficacy of the drugs on the market. This need is referred to again in the drugs and pharmacy annex, in dealing with the Central Public Health Laboratories.

3.8.2.12 Drug Analysis Section of the Central Public Health Laboratories The Drug Analyis Section of the Central Public Health Laboratories had, before the war, been carrying out analyses of several drugs. The WHO Regional Office at Alexandria had provided consultant support and fellowships to the drug analysis section. At least three staff members had been awarded fellowships for training in quality control of drugs. The laboratory was damaged badly during the war and a lot of equipment is kept together in one room and probably cannot be used again. Other equipment, not apparently damaged, is also not working. The laboratory authorities are taking steps to see what damage was caused by the shelling. This laboratory is the major facility of the Government in the area of investigational health sciences. The Government has now proposed that a National Drug Quality Assurance Laboratory be established as part of this laboratory. Space is available, as also the other facilities that will be shared by all the departments, (e.g., stores, administration services, animal facilities, etc.). Officials interviewed felt that it would be appropriate to house a National Drug Quality Assurance Laboratory at this centre. Although the only staff left in the Drug Analysis Section is one pharmacist, trained by WHO in quality control procedures, and one technician (the rest having left during the war), the Director of the Laboratories felt that he would have no problem finding suitable persons to work in the laboratories if equipment and supplies were provided by WHO. WHO is executing already a UNDP project on further development of central facilities at Beirut and development of regional laboratory facilities at four regional centres, with a WHO Consultant already in position.

3.8.2.13 Drug Prices. The Committee for Registration of New Drugs also fixes the price of the drug for which registration is sought. On the F.O.B. price of the drug, 7.5% is added for freight; 7.0% for customs, insurance and port fees; 10.0% for the importer; and 30.0% pharmacy's profit. Because each of these additions includes the previous ones, the rise in the price of a drug is 64.5% over F.O.B. value. A recently formed committee from the Department of Pharmacy has the mandate of looking into the prices of drugs already on the market but is still discussing the guidelines to be followed by them. MOH officials and advisors are all concerned at the high prices of drugs and of drugs be reduced. Particularly unacceptable to them is the fact that prices of the same drugs are cheaper in Syria and Jordan. It was asked, for example, why the same pharmaceutical concern has different prices for the same drug in the same packing in different packings. The national authorities are fully aware that the numbers of pharmaceutical import agents and pharmaceutical products are much higher in Lebanon than in Jordan and Syria and that this results in unnecessary use of unnecessary agents, leading to higher costs. However, reduction in the number of entities to be used in Lebanon could take a long time and it may not be possible for the Government to reduce the number of pharmaceutical import agents and pharmaceutical companies. The comparative figures are shown below.

Country	No. of Pharmaceutical Importing Agents	No. of Pharmaceutical Companies	Number of Pharmaceutical products on the market
Lebanon	89	488	12,000
Syria	Govt. (2)	196	3,000 (1970)
Jordan	36	189	2,538 (1979)

3.8.2.14 MOH Task Force on Drugs and WHO Programme on Drugs. The Government recently formed a Task Force on Drugs, with the same aims and objectives as the WHO Programme on Drugs. The task force is very interested in determining the number of drugs on the market and then in reducing the number of entities that need to be distributed by the governmental channels. The group is also very conscious of the lack of drug quality control laboratory facilities in the country and have identified establishing such a centre as a priority need. Finally the task force is very concerned at the prices of drugs on the market and is making efforts to reduce them. There are ample opportunities for future collaborative effort between WHO and the Government of Lebanon in the field of drugs.

3.8.2.15 Formation of an autonomous drug agency. The Government recently took a bold step in its efforts to reduce the cost of drugs. On 13 January 1983, by decree, an autonomous Office of Drugs/National Drug Agency was authorized, under control of the Minister of Health. The Agency will be responsible for the import, export, purchase, selling, distribution, and manufacture of drugs in the country. The head of the agency will be the President of its Executive Council, with a Ph.D. in Pharmacy, Medicine or Business Management. He will be a full time employee. The other members of the council will be two from the Department of Social Security (representing the Employers and Employees) and two others designated by the Minister of Health (with degrees in Law and Economics). There will be another member, a government official nominated by the Minister of Health. A Technical Committee will assist the Drug Agency. This committee will consist of: a professor of pharmacology from each of the two universities; a representative of the Ministry of Health (Head of Pharmacy Department); a representative of the Social Security Council (Head of Pharmacy Department); a representative of each Syndicate of Physicians (i.e., two persons); and two representatives of the Syndicate of Pharmacists. Each member should be either an M.D. or a licensed pharmacist in Lebanon. They should not be concerned, in any way, in business with drugs. The Technical Committee will: select drugs and pharmaceutical products for use in therapy and anaesthesia that should be imported, exported or manufactured in Lebanon; set conditions for calling tenders and the general conditions of purchase; check tha drugs received conform to technical specifications; and review lists of drugs at least once a year. The Executive Committee will also be assisted by appropriate administrative and support staff. The conditions of service, etc., will be specified in a decree taken by the Central Cabinet on the recommendations of the Minister. Other points mentioned in the decree include audit of the accounts of this Office of Drugs and the policy to be laid down for pricing the drugs. The Office of Drugs/National Drug Agency

will be granted a loan, as soon as the activity starts, on the recommendation of the Ministers of Finance and Health. The organization is not entitled to sell drugs or pharmaceuticals directly to the public except in emergencies which will be decided by the Council of Ministers.

3.8.3 Specific support systems: Transfusion services

Available information indicates that about 40-50 000 units of blood are transfused yearly in Lebanon. Of these about 35-40 000 are collected in the country, while 8 500 were sent from other countries in 1982. It is generally recognized that a population of three million would need about 150 000 units of blood, some of it divided into different components. The basic need for factor VIII (production of which is very limited in Lebanon) would be about 45 000 donor units (as cryo-precipitate).

There are three main sources of blood in Lebanon, in addition to what is received from international sources:

- The Lebanese Red Cross Blood Bank
- The Lebanese Transfusion Centre
- Private, Commercial Blood Banks

The Lebanese Red Cross Blood Bank was started in 1964, has continued with essentially the same structure, and lacks sufficient management and appropriate organization. The Red Cross has one centre each in Beirut, Jounieh, Tripoli and Zahle. It also has one unit in Beirut and one in Saida which do not collect blood but have refrigerators and distribute blood that is sent from the centres. The Lebanese Red Cross received 8 573 units of blood from other countries in 1982. It also collected 5 068 units of blood in 1982 from different hospitals in Lebanon. The 8 573 units received from other countries, plus the 5 068 units collected in Lebanon, make a total of 13 641 units from the Lebanese Red Cross in 1982. The Ministry of Health gives an annual contribution to the Lebanese Red Cross that roughly corresponds to the running costs of the transfusion activities (yearly LL 700 - 800 000). Hospitals and patients are not charged.

The Lebanese Red Cross Blood Bank is well known and respected and has several notable advantages. It has almost 20 years of activity and experience. Blood donation is voluntary and non-remunerated. It is neutral concerning the various population groups, and it has access to international assistance and expertise. However, it also has some disadvantages, including lack of sufficient management and organization, and its donor recruitment is not effective. Other disadvantages include lack of professional contact with hospital laboratories and hospital transfusion personnel, defective practice of delivery of blood to hospitals (with patients' relatives carrying the blood bags), and lack of arrangements for 24 hour service.

The Red Cross has since 1978 provided blood for transfusion of thalassemic children (about 150 thalassemic children at present), given at different hospitals, and now hopes to establish a transfusion center for their treatment.

The Lebanese Transfusion Centre (LTC), a non-profit association recognized by the Government as being of public utility, was started in 1972. The LTC has a centre in Beirut and branches in 8 major hospital laboratories, mostly in the Beirut area. The Lebanese Transfusion Centre collected 9 500 units of blood in 1982. 3 300 of those units were collected at Hotel-Dieu in Beirut. The Centre prepares blood components, including factor VIII (bleeding factor). In 1977 the Centre received substantial help from WHO, through the Government, in the form of equipment. This equipment was looted, during the fighting, but was partly recuperated in 1981. The Centre charges a processing fee from the hospitals, approved by the Ministry of Health. The rest of the budget is covered by a membership fee of the association and by donations.

Notable advantages of the LTC include the fact that it is a growing programme under dynamic and professional leadership, is not profit-oriented, and has good contact with hospitals. LTC's delivery of blood, laboratory testing, and quality control meet professional standards, blood donation is voluntary and non remunerated, and service is available 24 hours per day. Disadvantages of the LTC include its status as a private association (although recognized by the Ministry of Health) and the facts that it is not well known by all sectors of the population and has no formal affiliation to international organizations.

Private commercial blood banks also operate in Lebanon. The magnitude of their activity is difficult to estimate, but they may collect 40-50% of the total blood collected in Lebanon, (i.e., 20 to 25 000 units of blood annually). They serve mostly small and medium size private hospitals, but occasionally they also serve large hospitals when the blood supply from the Red Cross or the Lebanese Transfusion Centre is insufficient. Blood donors are paid different amounts depending on "market values". The price of rare blood may go very high. Some private, commercial blood banks may have quality controls, but most of them probably do not.

Information was obtained that some blood has also been collected by the Palestinian Red Crescent Society.

A limited amount of blood is collected from family members in emergency situations, when blood from other sources is unavailable.

Review of the overall status of blood transfusion services in Lebanon indicates the following:

- Lebanon has no national blood transfusion programme and no reference laboratory for blood type serology and transfusion.

- There is a distinct shortage of blood.

- A national programme is needed to meet the needs for blood for all patients and to assure that only blood of high quality is provided.

3.8.4 Specific Support Systems: Laboratory Services

Health laboratories are an essential tool for developing and implementing epidemiological surveillance and disease control operations. Lebanon needs to increase its capacity for laboratory services, especially to support preventive activities.

3.8.4.1 Curative-oriented laboratories Many private curative facilities have medical laboratories performing the most common clinical tests. Several private laboratories in major cities perform medical tests for ambulatory patients. No information is available concerning the resources and the activities of such treatment-oriented laboratories. In 1966, with WHO assistance, the Government set up laboratory diagnostic services in selected public hospitals (Baabda, Saida, Halba, Tripoli, Zahlé).

3.8.4.2 Prevention-oriented laboratories The Central Public Health Laboratory in Beirut, which partly met the demand for prevention-oriented tests of public interest (epidemiological surveillance, food microbiology, environmental health, drug control, etc.), slackened its activities since 1974, then stopped in June 1982. The facility was severely damaged by shelling in August 1982, but repairs have been completed (with assistance from Swiss Disaster Relief) and re-equipping is under way (with assistance from UNICEF and WHO). It can be hoped that the Central Public Health Laboratory in Beirut will be operational again within a few months. We do not know of any other prevention-oriented health laboratory in Lebanon. Government signed a project with UNDP and WHO in 1980 to develop and strengthen the Central Laboratory in Beirut, establish six public health peripheral laboratories, and train scientific and technical personnel. Implementation could only start in 1982.

3.8.4.3 Advisory Committee for Laboratory Network Development Programming in the field of medical laboratories should aim at developing a network of prevention-oriented laboratories, but basic data is needed to develop sensible and realistic programmes. An Advisory Committee on Health Laboratories could advise the MOH regarding the information needed, help the MOH to obtain it, and then help design and develop the laboratory network. The health laboratory network should be able to carry out tests necessary for epidemiological surveillance and communicable disease control; provide data for analyses necessary for the establishment of prevention and control programmes; participate in training of scientific and technical personnel in health laboratories; and undertake, at the request of the health authorities, any laboratory research which could help clarify and solve priority health problems in the country.

4. NATIONAL HEALTH POLICY

One of the main objectives of the WHO/LRCS mission was to respond to recent national health policy proposals of the MOH, particularly as presented by H.E. Dr Mroueh in December of 1982. Section 4.1 below summarizes some of the main features of the December 1982 proposal and of the proposed Area Health Authority Law (embodying many of the concepts presented by the Minister), which are also discussed in other sections of this report and in the annexed consultants' reports. Section 4.2 summarizes features of the 1978 law regarding the establishment and operation of Autonomous Hospitals (which provides another possible mechanism for carrying out many of the changes proposed in the Area Health Authority Law). Section 4.3 directs attention to several other aspects of health policy which are currently under active discussion among MOH officials and their advisors. (Section 4 is based on sections of the Health Finance Study team's report, in Annex D, which discusses the proposals and their implications in greater detail, particularly with regard to finances.)

4.1 THE PROPOSED HEALTH POLICY (DECEMBER 1982) AND AREA HEALTH AUTHORITIES

The Minister of Health proposed that the health sector be reorganized to make more effective use of public and private resources, under the guidance ("centralized control") of the Ministry of Health, but with "decentralized authority" delegated to Area Health Authorities (AHA). About fifteen such Area Health Authorities would be created, each of them responsible for the health care of about 200 000 people. Some key quotations from the Minister's address clarify the proposal:

> "This model calls for the pooling of all resources at the area as well as central levels .... interaction and partnership with the private sector institutions at all levels and wherever needed .... active participation and commitment of the community leaders - in the decision-making process - .... the ... Ministry of Health .... (as) the primary and most important manager of health services in Lebanon and has the greatest authority and responsibility in the health care delivery system .... The implementation of these activities require extensive capital and recurring financing. ... The financing of the health services will be the responsibility of the National Social Security Fund, itself rejuvenated through a well conceived system of fair taxation and co-sharing mechanism, between the citizens of Lebanon, the employers, and the State."

Consistent with the GOL policy of assuring all citizens the right to good health, Lebanon is in the process of restructuring its health care system. The Area Health Authorities concept, according to MOH officials, has been approved in principle at the GOL ministerial level and is being put into legal language so that it can be considered for legislative approval and enactment in the near future. The Area Health Authority (AHA) concept emphasizes comprehensive health care with a full range of preventive and curative service provided in public and private health facilities in a coordinated fashion.

The AHA law proposes a two-tiered system. First would be a central level Directorate which would guide the system primarily by setting standards, setting general policy, planning, and supervision, and generally reinforcing professional and administrtive systems.

The second level would be the area level consisting of some 10 to 24 "Area Health Authorities" (AHA), each serving between 200,000 and 400,000 persons. The AHA's will be autonomous entities. Each AHA would have a Director, a policy committee and at least one general hospital as well as necessary outpatient facilities in which to provide all levels of health care.

Primary care is emphasized in the AHA concept. Also envisioned is a financing arrangement which would permit individuals to select their provider: public, voluntary or proprietary. In essence there would be competition between the public and private sectors for personal health services. Categorical public health services such as food and water safety, sanitation, etc., however, also would be the responsibility of the AHA.

Each AHA would have the authority to structure its health care so as to meet its health needs most effectively. Innovative arrangements of physicians and health facilities into organizational structures capable of providing comprehensive care would be encouraged. Establishing an HMO, for example, has been suggested. The AHA would have the authority to set salaries or to establish alternative compensation packages for employees so as to attract and retain dedicated staff.

Three kinds of budgets are envisioned for the AHA: a capital budget to support facility and other development which would come from the central Ministry of Health; a recurrent or operating budget which also would come

mainly from the MOH; and finally an autonomous budget from funds collected by the AHA for services rendered to private patients and reimbursements from public sector and private sector agencies. The autonomous budget would be used at the discretion of the AHA. Autonomous budget funds could be used, for example, for development efforts, to cover operating deficits, or to provide incentives to health workers.

The specifics of the interrelationship of the three budgets would be more clearly defined as the AHA system is implemented. However, the Minister stated that the development budget would favor AHA's with relatively less-developed infrastructure and services, while the recurrent or operating budget would favor AHA's with more developed infrastructure and services.

To govern and manage the new AHA system, directors and advisory boards or councils are proposed for both the central level and the area levels. These boards aim at getting community representation into decision making.

4.2 THE AUTONOMOUS HOSPITAL ACT OF 1978

The act proposes to establish autonomous public hospitals, one for each province. The act also allows for extension of the autonomous mechanism throughout the provinces to all MOH health facilities and services.

A board of directors is created which is responsible for the autonomous hospital system, but which reports to the Minister of Health. Funding for the hospitals comes primarily from the MOH. Seven members sit on the board. Members include a representative each from St. Joseph's and AUB, the Director General from both the MOH and the NSSF, two representatives from the Lebanese Order of Physicians and one "expert". The board is to meet monthly.

Also meeting monthly is a separate board responsible for each hospital. This board consists of one professor each from St. Joseph's and AUB medical schools and two local citizens with college degrees.

Under the Act, hospitals can hire and fire employees and can set compensation for physicians and other employees essentially as they see fit. Hospitals may charge private patients directly for services.

To date, no autonomous hospitals have been implemented under the Act. However, with or without modification the Act could be used as the umbrella arrangement under which MOH hospitals could be given autonomy and flexibility to restructure their operations consistent with the needs of a revised health care delivery system.

In spite of several flaws (discussed in Annex D), the Autonomous Hospital Law presents many opportunities for the public hospital system to become more financially secure and to be able to compete with the private sector for the services of health professionals. While strictly speaking no hospital is currently operating to this law, the Batroun Hospital is operating under a semi-autonomous arrangement with the NSSF. The Minister of Health has been interested in the possibility that the Batroun Hospital might serve as a model for a reorganized public hospital system. Thus the experience of the Batroun Hospital (also reviewed in Annex D) is highly relevant to the objectives of the MOH.

4.3 OTHER POLICY ISSUES: FINANCE SYSTEM CHANGES AND EXPANDED MOH HOSPITALS

The MOH is actively exploring the financial implications of the proposed changes in the health care system, possible mechanisms to improve the financial base of Government-backed health care, and ways of improving the financial soundness of the mechanisms involved in the Government's support of health services.

The Ministry of Health has also expressd much interest in expanding its capacity to directly provided health services by greatly increasing the number of MOH hospital beds. If this were to become Government policy and an attempt were made to implement it, the consequences would be far reaching and, according to the finance study team's analyses (presented in Annex D and summarized in Section 3.5.5), unfortunate.

5. CONCLUSIONS AND RECOMMENDATIONS BY THE ASSESSMENT MISSION

This section lists, grouped by major areas of the health sector, the conclusions and recommendations of the assessment mission, proposing a series of actions to be taken in the period 1983 to 1986 to rebuild and re-establish the Lebanese health services and to improve their coverage and quality.

5.1 NATIONAL HEALTH POLICY

The Assessment Mission concluded that implementation of the major reorganization proposed by the Minister of Health, which contains many elements necessary for substantial improvements in Lebanon's health care system, was feasible and that immediate steps could be taken to begin to implement it, but that full implementation would require 10 to 15 years.

> RECOMMENDATION 01: The Mission recommends that steps be taken immediately to implement the Minister's plan, initially on an experimental basis in Beirut, if Government fully backs it, if the ministry's central level can be reinforced (including especially the anticipated establishment of an effective national health planning office), if adequate compensation arrangements can be made for all personnel in the project, and if fully qualified and experienced managerial personnel can be recruited for its central and area levels.

Implementation of the changes which the Minister of Health has proposed will require strong political support from the highest levels of government over a long period of time. This support must be assured. A public declaration of the Government's commitment to the policy and changes will provide that assurance, inform all parties that the Government is serious about taking control of the health sector and improving its performance, and give the Ministry of Health a very clear mandate to proceed to implement the changes with which the rest of the recommendations are concerned.

> RECOMMENDATION 02: Public reaffirmation should be made, by highest levels of Government, of health sector policy, goals, and objectives, in support of December 1982 MOH statement.

5.2 NATIONAL HEALTH PLANNING

The anticipated establishment of a national health planning unit is an important step in the direction of an organized health services delivery system. It will greatly strengthen the Government's ability to plan and carry out the other recommendations given below.

RECOMMENDATION 03: The Government should immediately use the national health planning unit to undertake national surveys of epidemiology; health knowledge, attitudes, and practices; health manpower; and hospitals.

RECOMMENDATION 04: The national health planning unit should seek to obtain early valid results of the surveys which it will carry out and should use those results as partial bases for national plans for health manpower development, epidemiological services, primary health care, a health center network, and a national master plan for hospitals.

RECOMMENDATION 05: Steps must be taken now to clearly define and establish the role of the planning unit, to integrate the unit (including a health manpower planning section) into the formal structure of the Ministry of Health, and to give it a permanent and institutionalized basis. This means emphasizing training of staff, making provision in future years' budgets to meet the recurrent cost upon expiration of grant funds, and making organizational arrangements which will maximize decision makers' use of the unit's findings and recommendations.

5.3 ORGANIZATION OF THE HEALTH SECTOR

Lebanon's health services delivery system, public and private, is fragmented and uncoordinated. The powerful private medical care sector dominates a weak and disorganized public sector health system which spends a large proportion of its budget on uncontrolled reimbursements for private sector hospital services of uncertain quality and need. The public sector is overly centralized, and both public and private health resources are concentrated in urban areas, particularly Beirut.

The major changes which the current Minister of Health has proposed for the health sector require and imply major reorganization of the sector.

RECOMMENDATION 06: Legislation should be enacted (preferably by the end of emergency powers on 6MAY83) to change the structure of the health sector by merging into the Ministry of Health (renamed the Ministry of Health and Social Affairs) the health sections of the Ministry of Labor and Social Affairs (i.e., the Office of Social Development) and the health services sections of the Ministry of the Interior (i.e., health services of Beirut and of other municipalities).

RECOMMENDATION 07: The Government should mandate the establishment of autonomous Local Area Health and Social Affairs Authorities (AHAs) to arrange for the provision of quality health care to all Lebanese, within national health policy and with emphasis on equitable distribution, preventive services, first contact care, and continuity of care. The Government should use those autonomous local organizations (autonomous, but with strong Government backing, including strong central support) to furnish direct government-provided health services and to manage other arrangements (e.g., agreements with AHAs and contracts) for the provision of services. This would help avoid the constraints imposed by civil service systems. Implementation should begin in Beirut.

RECOMMENDATION 08: The Government should consider all public and private health resources in each AHA's geographical area as parts of one system in planning AHA budgets and operations, and place all of those resources (including especially hospitals) under the AHA for administrative and Government reimbursement purposes. Without control of hospitals, AHAs and preventive services would have only a minor role in health, while hospitals and curative services would continue to attract an undue share of attention and of budgets.

RECOMMENDATION 09: The Government should place major emphasis at the national level on primary (first contact) health care and on preventive programmes, and should structure the health care budget and incentive systems to ensure that the corresponding programmes will also be effectively implemented by and within AHAs. This is crucial for cost containment if the major needs of most of Lebanon's population are to be met.

5.4 FINANCING OF THE HEALTH SECTOR

In 1982 the public sector spent roughly LL 551.0 millions on both directly providing services and on reimbursing costs of private sector medical services. Roughly 80% of total public sector health spending was spent on private sector reimbursement. Total spending on medical services in Lebanon in 1982 is estimated to have been at least LL 1.1 billion, roughly 50% public and 50% private. Drug costs as a component of total health expenditures range from 38 to 42% of total outlays on health.

Health care financing mechanisms in Lebanon have many serious various problems and weaknesses. The health sector finance study team (See Annex D) concluded that changes in financial mechanisms could do little to improve the health services delivery system unless such mechanisms and incentives were incorporated into a system of financial mechanisms, policies, and procedures to assist in improving the performance of the health care system, with consistency between policies being implemented by both health care and

financial decision makers. The basic health sector policies that are required in order for a recommended financial strategy to have maximum support effect must be clearly presented prior to specifying a cost effective financial strategy that is consistent with the allocation of Government resources, demand and supply factors, cost containment, and other elements.

In planning, budgeting, and forming policies for the future, the Government should view both private sector and public sector health resources as potentially being mobilized toward assisting the government in meeting the health needs of the population. The health sector finance study team judged that little emphasis should be placed on expanding public sector services delivery systems, and great emphasis and commitment should be devoted to regulating the private health sector in a fashion which brings it into a more effective partnership with government in achieving the nation's health sector goals. They also concluded that there is no reason in principle, particularly from an economic perspective, not to rely on the private medical sector to provide the bulk of medical services, if effective regulation can improve quality of service, medical practice and performance, contain costs, and reduce duplication of facilities and other wastage. In the judgement of the finance study team, there is no economic justification for anything other than a modest and selective expansion of public sector medical facilities in the next five to ten years. They recommend places emphasis on regulation backed up and linked to a system of financial incentives which tends to harness public and private sector health resources to a common task of improving the health status of the population. Given the current situation existing in Lebanon, a great deal can be said for Government's adoption of a strong regulatory posture with respect to the private medical sector. A large volume of public sector reimbursement presents Government with an opportunity to use financial reimbursement broadly as an instrument of health sector policy.

To most effectively carry out the changes discussed above and the policy proposed by the Minister of Health, a national insurance financing mechanism for payment of medical services needs to be established which is standardized and uniform for the whole country and which is acceptable to the providers of services, the service users, and the payors of services.

RECOMMENDATION 10: The Government should establish the legal and administrative structure for a "National Health Security System" (described in Annex D, the Jeffers/Zukin financing report), by initially (a) consolidating all public sector health services cost reimbursements in one financing agency and (b) establishing a uniform fee schedule for health services. [Each of these latter two actions is also recommended in its own right.]

RECOMMENDATION 11: Detailed plans need to be developed for the implementation and management of the proposed National Health Security System. Given the numerous reimbursement mechanisms and payment schemes which exist, and the ways in which individual countries have tailored them to their own needs, planning such programs is a highly specialized and complex activity which should be undertaken by a team of experts to develop mechanisms most appropriate to Lebanon's special needs. A number of high level policy decisions will be needed to guide such a team's work.

RECOMMENDATION 12: Limits should immediately be established on the amounts of Government funds which will be available (especially through the MOH) for reimbursement of private sector health care services, and the Government should establish, monitor, and enforce quality standards (applicable also to Government-provided services) for all health services for which it makes reimbursement.

5.5 MANAGEMENT SYSTEMS

Management systems, from the central levels to the most peripheral levels through the proposed decentralized AHAs, need to be established or strengthened or reintroduced. Some of these areas are covered in various sections of this report and its annexes and are also dealt with in other recommendations, but there is a definite need to specifically consider the relationships and interactions among them and to establish systems for dealing with both routine work and routine problems in each area, as opposed to only initiating special efforts which will deal with the currently most salient problems.

"Management by exception" would free the leaders and managers of the health services (especially at higher levels) to focus on the innovations, improvements, and non-routine problems which really require their full abilities. It would also make the functioning of the system less dependent on individual personalities and, with an adequate information system, less susceptible to unnoticed deviations from norms.

RECOMMENDATION 13: Strong, effective management systems should be developed and institutionalized in all of the following areas:

- Personnel Management: need assessment, position descriptions, recruiting, testing, selection, career planning, promotion, and dismissal.
- Logistics: procurement, warehousing, and distribution of supplies and materials.
- Maintenance: preventive maintenance, repair, and upkeep of equipment, vehicles, and buildings.
- Information systems: collection, organization, and reporting of information for planning and management decision-making.
- Financial systems: budgetary, accounting, billing, collection, expensing.
- Planning.
- Monitoring, quality assurance, and evaluation.

RECOMMENDATION 14: Management systems and routines should be developed which will enable the workers and managers available within the health services to deal with most problems in accordance with standardized procedures.

RECOMMENDATION 15: In view of the history of lax fulfillment and enforcement of government contracts and service arrangements in the health sector, the Government must urgently develop and apply effective mechanisms to ensure adequate and acceptable performance, in accordance with clearly-specified terms, by hospitals, physicians, and others employed or contracted to provide or manage health services. Even with well-developed systems for monitoring and enforcement, dedicated people must be found who can be trusted to monitor and enforce such arrangements, and such people must be rewarded and kept in the health care system.

RECOMMENDATION 16: Combined training and system development activities such as WHO-backed Workshops for the Management Process for National Health Development should be initiated.

5.6 HEALTH SERVICES DELIVERY IN THE METROPOLITAN AREA OF GREATER BEIRUT

The health sector requires regulation and does not follow the principles of free enterprise and laissez-faire economics. Government has greater contact with organizations and inhabitants in Beirut, which also contains a high proportion of the nation's population. Reorganizing and operating the coordinated health services in Greater Beirut would provide needed experience on which to base development of other AHA's elsewhere in Lebanon.

A Master Plan for Health Services Delivery in the Metropolitan Area of Greater Beirut is needed (a) to provide a framework for orderly growth and rational expansion based on the population's health needs, and (b) to prevent uncontrolled and unbalanced growth, which is wasteful and inefficient.

RECOMMENDATION 17: The Government should begin its attempts to regulate the health sector in Beirut.

RECOMMENDATION 18: A master plan must be developed for coordination of health services delivery in the metropolitan area of Greater Beirut (including provision for recommendations 19 through 22).

RECOMMENDATION 19: Structural/Organizational/Institutional Coordination for Beirut should be established, including:

(a) A supportive and complementary working relationship between the private and the public sectors. An appropriate mechanism to achieve this coordination is an equitable insurance scheme for payment of services.

(b) Integration of the various public sector health components, i.e., the Ministry of Health, the Ministry of Interior (health services in the Beirut municipality), the Ministry of Education, the Ministry of Labor and Social Affairs, the National Social Security Program, and the Ministry of Defense.

RECOMMENDATION 20: Functional or Service Delivery Coordination for Beirut should be established, including:

(a) Functional relationships and referral mechanisms for public and private sectors (for preventive and promotive services, first contact care, out-patient services, short-term in-patient services, emergency services, rehabilitation services, and long-term hospital and non-hospital care).

(b) Coordination of personal and non-personal health services, social health and life-style changes, and changes in environmental health conditions.

RECOMMENDATION 21: Financial Coordination for Beirut should be established. An equitable payment for services scheme is a necessary condition for an effective and efficient coordination of health services in Greater Beirut. Payment for service must consider and balance the interests of the provider of service, the consumer of service and the payor of the service.

RECOMMENDATION 22: Coordination of Teaching and Service Delivery for Beirut should be established, in order to

(a) strengthen and adjust the curricula of medical and allied health schools to the needs of the Beirut and national community, and

(b) strengthen the delivery system through the participation of students, interns and residents in the delivery of health care at all functional levels.

5.7 HEALTH MANPOWER AND TRAINING

In the previous absence of a clearly formulated national health policy, no health manpower plans have been developed. This and fragmentation of the health sector constitute serious constraints in planning comprehensively for the health sector in general and for health manpower and training in particular.

Health manpower (and especially physicians) is poorly distributed, with excessive concentration in urban settings and particularly in Beirut, which has 52.6% of the total number of physicians.

Many agencies compete for the same health personnel and each operates independently to prepare its own human resources. Low public sector salaries have led to an "internal drain" of available manpower into the private sector which dominates the health services delivery system. It is paradoxical that, while the Government spends a great amount of money (over two thirds of the MOH budget alone in 1982) contracting the private sector for curative care of the citizens, its own conditions of service are a major constraint in securing the services of sufficient numbers of staff in the public sector.

There is no pressing need to increase the number of physicians, dentists and pharmacists. While there is no shortage of physicians, there is a marked shortage of paramedical health personnel, especially at the middle level. The greatest need for additional health manpower is at the middle level (nurses, various types of technicians, department level managers). There is a strong need for training intended to help improve the managerial capacity of the health system, including management of the health planning process and the management of service delivery.

There has been a steady increase in the number of Lebanese physicians graduating abroad, and in recent years they constituted 52% of registered physicians. These physicians are not well oriented to the health problems of the country and the health system. The issue of licensing and credentialing foreign medical graduates is of critical importance. While a solution specific to Lebanon must be found, U.S. experience in dealing with foreign medical graduates may provide some guidelines.

The training programmes of physicians and other health personnel studying in Lebanon are predominantly oriented to curative hospital based medical care rather than to comprehensive health care. The Faculty of Health Sciences of the American University of Beirut has tried to organize field training of its students in the community in collaboration with the Ministry of Health and other health agencies, but the war made that impossible.

The establishment and operation of health personnel training institutions is apparently not effectively controlled or coordinated. No convincing data or other evidence exists to justify the need for more than two medical schools in Lebanon, but two officially unrecognized and unaccredited schools have begun to function.

There is difficulty in attracting sufficient numbers of students to study nursing. Apart from the unattractive conditions of service, the location of most nursing schools in Beirut seems to be responsible for this situation, since families in rural areas are reluctant to allow their daughters to come and live in Beirut. In planning any new nursing schools, it is important, therefore, that these should be established in the Mohafazat outside Beirut so that students would be living in or within easy reach of their communities.

RECOMMENDATION 23: Priority training actions must be geared to strengthen in quality and quantity the middle level personnel of the health sector. Each of the six regions (Mohafazat) (and eventually each AHA area) should have training facilities for that level.

RECOMMENDATION 24: A national health manpower survey must be carried out to provide a basis for a national health manpower plan for the training and utilization of all levels of health personnel.

RECOMMENDATION 25: A detailed long range health manpower plan, including the professions of physicians, dentists, and pharmacists, among others, must be developed before any actions are taken to encourage or permit increases in their numbers.

RECOMMENDATION 26: If the Government (in spite of lack of evidence justifying the need for more than two medical schools in Lebanon) decides to expand undergraduate training of physicians, rather than establish a new separate school it should instead consolidate and strengthen, under the National University of Lebanon. the resources of the two existing unrecognized and unaccredited schools and establish a medical curriculum designed to meet Lebanon's specific needs.

RECOMMENDATION 27: Legislation setting standards and requirements for the establishment, recognition, and operation of health personnel training institutions, especially medical schools, should be enacted or enforced.

RECOMMENDATION 28: A National Medical Council should be established. The Council would be responsible for recognition of degrees, licensing examinations, licensing and registration of health professionals, monitoring the quality of care, and application of the medical code of ethics. The Council would also determine the number of students that are required to study medicine or any other health profession, whether within Lebanon or abroad, and set the criteria and procedures for their selection.

RECOMMENDATION 29: Training of health services managers, and position-specific management training of other health services personnel, must be provided. Areas to be covered would include, for example, all levels of planning, facilities management, budgeting, and team management.

RECOMMENDATION 30: Health personnel training (initial, continuing, and postgraduate) should be reoriented to help translate the new national health policy into reality. This will require emphasis, for example, on primary health care, prevention, community and patient relations, and the management areas mentioned above.

RECOMMENDATION 31: Government health worker salaries need to be increased, with at least half of salary increases tied to performance. Incentives can be based on individual or collective performance standards, depending on the type of health worker. The proposed reorganization of the health sector lends itself to innovative compensation experiments.

5.8 EPIDEMIOLOGY SERVICES

Lack of basic health information poses a serious constraint in identifying health problems objectively and in setting priorities for planning and operational purposes.

The Ministry of Health is responsible for preventive programmes which affect the population in general; disease prevention and control, environmental health, social and occupational health. There is need to have a capable central and provincial structure to direct, monitor and evaluate public health activities, especially with regards to disease prevention and control and environmental and occupational health. Early action is necessary to re-establish epidemiological services to provide key information for decision making in health sector reconstruction. A national epidemiological survey of morbidity and ongoing epidemiological services (including surveillance) are needed as bases for health services plans and operations.

In spite of the current lack of adequate epidemiological services in the Government, Lebanon is potentially capable of developing and implementing sound epidemiological work, and of establishing an adequate national epidemiological surveillance and analysis system.

RECOMMENDATION 32: The Directorate of Public Health must be reactivated and supported, under the leadership of an epidemiologist, and local publi health programmes must be strengthened (including provision of experience and responsible leadership at the provincial level and the re-training an in-service training of local health workers).

RECOMMENDATION 33: An epidemiological and health KAP survey of client and the general population should be carried out as one of the first step toward determining health care needs and strengthening first contact care (PHC).

5.9 MATERNAL AND CHILD HEALTH

The concepts of maternal and child health have long been known in Lebanon, but they are not well applied at present. A full program of maternal and child health services is needed, with priority to those activities most likely to have health impacts on the population.

RECOMMENDATION 34: Special attention must be paid to high risk groups such as pregnant women, infants, and pre-schoolers.

RECOMMENDATION 35: The full range of immunizations (DTP, Polio, Measles) should be provided on a national (public) basis, including record maintenance both in a "family health booklet" and in clinical record forms.

RECOMMENDATION 36: The reported recrudescence of poliomyelitis must be confirmed or refuted. A vaccination campaign against poliomyelitis should be instituted. If poliomyelitis does constitute a threat but a nationwide campaign is not possible now, vaccination should at least be provided to all susceptibles in the focal areas of the disease.

RECOMMENDATION 37: Growth charts should be reintroduced for the regular monitoring of growth and development, at least among small children.

RECOMMENDATION 38: If a repeat study on a representative sample confirms earlier results of a satisfactory nutritional status among preschool children, MCH programmes should be directed preferably to the mother and child up to 2 years of age, and underfive clinics may not be cost-effective.

RECOMMENDATION 39: An active program to promote correct treatment of diarrhoeal disease (based on oral rehydration) should be established.

RECOMMENDATION 40: Traditional birth attendants should be integrated and retrained. There is evidence, however, that TBA are effective only when they are trained for specific skills such as reducing the incidence/prevalence of neonatal tetanus or when they work in close contact with highly professional systems of maternal and perinatal health care.

5.10 PRIMARY HEALTH CARE

Attention to primary health care is an important early step in reconstruction efforts, not only because of its own intrinsic importance, but also because the present system, created with little or no attention to first contact care, continuity of care, and other primary health care concepts, is collapsing under the financial strain of inappropriate use of hospitals and escalating medical care costs.

RECOMMENDATION 41: Primary health care should form the basis for the health care system and should be given major emphasis by the Government of Lebanon in order to demonstrate its concern for the people's health and to make most effective use of health care resources.

RECOMMENDATION 42: Primary health care (in the sense of first-contact care) in Lebanon must be provided in ways which meet the needs and the reasonable expectations of all the people. This may require that doctors and nurses based in health centres and in some hospitals provide such first contact preventive, promotive and curative care in all communities and with full support from the Government of Lebanon.

RECOMMENDATION 43: A few health center based demonstration projects (in Beirut and elsewhere) should be established soon, to provide comprehensive PHC, with community participation, with continuity of care, and with adequate management, technical, and hospital support. These would provide experience on which to base further decisions and programs.

5.11 HEALTH FACILITIES

The WHO/LRCS assessment mission is not in the position to recommend further hospital development in Lebanon (beyond proposing that the Government consider certain possible avenues of development noted below) until a more comprehensive detailed study can be made region by region, covering the need for acute and long term hospital treatment. Such an investigation would have to take into consideration the plans for primary health care, which will have a direct effect on the number and types of beds and on where they will be needed. This survey, which is urgently needed, must also review the different projects concerning new hospital construction emanating from the initiatives taken by various private and voluntary sources throughout Lebanon, so that any additional beds (and types of beds), to the extent possible will be geographically correctly distributed according to the needs.

Private hospitals play an important role in Lebanon. It is in the "voluntary" private sector hospitals that the country's major hospital care takes place.

There are only 12 functioning government hospitals, all out-dated and under-used They suffer the stigma of being places to go to only if the family cannot possibly pay, either directly or by insurance, for anything better. The loss of confidence in Government hospital services is accentuated by shortages of staff at all levels.

Only 690 public hospital beds are operational (and only 20 in Beirut), out of the existing total of 9 972 hospital beds for acute and chronically ill-patients. Immediately, however, there is a capacity to double the number of functioning MOH beds.

In 1982 the MOH utilized and paid for approximately 1 184 beds per day in the private sector. The government at present pays for some 40 000 hospitalizations per year for acute care patients in the private sector. The Government needs to increase the benefits which it and patients receive from the very large amounts of funds paid to private sector hospitals through the MOH. To do this, it needs to increase the favorable influence which it can exercise over the private sector. A methodology must be established for better cooperation between the private and public hospitals which should give the patients freedom of choice and improve their hospital and health care. A situation must also be created whereby the Government health and hospital services can provide high quality care, to be given with priority to the poorer sectors of the society.

The recommendations regarding construction and reconstruction of public hospitals given here and in Annex E are offered for consideration by the Government with the caveat that they should only be considered if needed improvements in organization and management (Area Health Authorities, strengthening of Ministry of Health, fully functioning National Health Planning Unit, management support systems, etc.) seem very likely to take place, if problems of staffing and recurrent costs can be resolved, and if justified on the basis of results of a thorough survey/study of health facilities.

The currently contemplated massive expansion of the public hospital sector, while having considerable appeal on the surface, appears to present considerable strain on GOL fiscal, administrative, and management capacities. This is not to say that a case cannot be made for constructing some additional public hospital beds. However, the economic rationale suggested for a large expansion of public hospital bed capacity is neither compelling nor justified. Thus the GOL ought to give serious consideration to various alternative health sector development policies which would be less demanding of public sector resources.

RECOMMENDATION 44: Prior to determining what changes will be made in existing public hospital facilities, the Government should conduct a national survey of all hospital facilities.

RECOMMENDATION 45: The Government should develop a National Master Plan for Public and Private Hospital Facilities. The plan should be based on assessments of current and projected needs for hospital beds, on financial plans and projections, and on Government policy decisions regarding such matters as how to meet primary health care and outpatient service needs and what proportion and types of hospital beds and services should be provided through government facilities. The plan should include numbers and types of hospital beds and services, by geographic area and by Government or other ownership.

RECOMMENDATION 46: If the Government's capacity to manage and utilize its own hospitals can be sufficiently strengthened, and if detailed analyses indicated that increasing public sector beds would be financially feasible and beneficial (as does not seem to be the case, in comparison with the alternative of increased control and improved selective use of the private sector), then the Government might consider increasing the number of beds in the public sector. This could enable the Government to provide hospital care for the indigent population which is the responsibility of the MOH. Given those considerations, it is recommended that the following be considered, pending actions to strengthen management and utilization of public sector beds and pending a survey to develop a national master plan for hospitals:

Upgrading, equipping and staffing 580 existing but non-operational public hospital beds so they can be utilized.

Installing a 200 bed temporary public hospital in Beirut) convertible to other uses later).

Constructing a new public hospital in Beirut with 300 beds, also to be used as a supporting centre for training of nurses, paramedical, and public health staff, with emphasis on community health and primary health care.

If this were done, in addition to the newly started renovation of the 200 bed Quarantina hospital in Beirut and the plans to install a 130 bed temporary hospital in Saida, the total national bed/population ratio would increase to approximately 3.7 beds per 1 000 inhabitants.

RECOMMENDATION 47: The Government should use reimbursement for services provided as a means of expanding MOH control over private hospital beds. As one interim measure to permit the Government to increase its control of the use and quality of the private sector hospital services for which it pays, arrangements might be made with one or more private hospitals (probably in Beirut) under which the Ministry of Health would guarantee to utilize a certain proportion of a hospital's beds (e.g., 90%), at standard MOH reimbursement rates for beds and services, in return for increased MOH control of admissions and facilitation of MOH monitoring of services and charges.

5.12 DRUGS AND THE PHARMACEUTICAL SYSTEM

The drug and pharmaceutical system is out of control of the Government. Illegal pharmacies are operating. Counterfeit drugs and other drugs not approved by the MOH are present on the market. Drug costs are rising rapidly. Forceful actions are necessary in order for the Government to gain needed control over the drug sector, decrease the hazards which that sector now presents to the health of the people, increase the health benefits of money spent on drugs, and control rapidly rising drug costs.

Some of the Government actions in the drug and pharmaceutical sector should be carried out in the very near future and be in full effect at the end of 1983:

RECOMMENDATION 48: Amend and strengthen current drug legislation, including regulation and licensing of pharmacies, and increase Government's willingness to take action and impose sanctions on offenders. Illegal pharmacies should be closed if they cannot fully conform to national laws and become legally authorized to operate.

RECOMMENDATION 49: Control safety and efficacy of essential drugs, by sending samples to recognized international drug testing laboratories outside of Lebanon and enforcing laws on the basis of results of analyses. Counterfeit and ineffective or otherwise dangerous drugs must be controlled, by applying and strengthening existing laws.

RECOMMENDATION 50: Formulate and release a national policy statement on drugs (based on recommendations of a high level task force with WHO representatives or on a commissioned expert study).

RECOMMENDATION 51: Strengthen Inspectorate of Pharmacy Department of MOH and take legal actions against drug legislation offenders.

RECOMMENDATION 52: Decrease the number of drugs of the market, initially by forcing removal of unapproved drugs.

Other Government actions in the drug and pharmaceutical sector cover a longer range of time. Although preparations for those actions should begin in 1983, their full implementation will be during 1984 and 1985:

RECOMMENDATION 53: Establish National Drug Quality Assurance Laboratories in Beirut.

RECOMMENDATION 54: Inventory and register all drugs on market in Lebanon.

RECOMMENDATION 55: Further decrease the number of drugs of the market, by reviewing all drugs (including those previously approved and those newly submitted for approval) and allowing marketing only of those which are safe, effective, and needed (based on WHO list of essential drugs).

RECOMMENDATION 56: Establish a National Office of Drugs with sufficient authority, resources, and Government support to carry out its mandate.

RECOMMENDATION 57: Carry out studies on drug utilization (prescribing practices, self-medication, etc.).

RECOMMENDATION 58: Disseminate information about drug use to providers of health services, to patients, and to the general public.

5.13 EMERGENCY MEDICAL SERVICES

The metropolitan area of Beirut lacks a quality medical emergency care services network. The reconstruction and expansion of the Quarantina hospital provides the opportunity to add a well equipped trauma centre to serve the metropolitan population.

RECOMMENDATION 58: An effective medical emergency care services network should be implemented for Greater Beirut. A radio-telephone communication system must link the ambulances, the trauma centre, the two university hospital emergency departments, and eventual first aid stations, to permit effective dispatch of vehicles and assignment of patients destination for treatment in health facilities.

5.14 BLOOD TRANSFUSION SERVICES

There is a shortage of blood for transfusion in Lebanon, and transfusion services are fragmented and in some cases need improved quality control. Existing human technical and organizational resources could form the basis for a National Blood Transfusion Service.

RECOMMENDATION 60: A National Blood Transfusion Service should be established, incorporating the resources of the existing transfusion services, with the Lebanese Red Cross responsible for all operations. The medical director must be a haematologist specialized in blood banking and transfusion.

RECOMMENDATION 61: As a first step toward establishing a National Blood Transfusion Service, a national organizing committee should be appointed by the Minister of Health, to (a) establish the administrative and organizational structure, (b) appoint the Medical Director of the National Blood Transfusion Centre, and (c) provide a budget financed through the MOH.

5.15 LABORATORIES

Adequate health laboratory services need to be developed, especially to support primary health care and preventive services throughout Lebanon.

RECOMMENDATION 62: Regional laboratories should be developed, to ensure that basic laboratory facilities are available for support of primary health care services.

RECOMMENDATION 63: An Advisory Committee for the Central Public Health Laboratories should be formed, to enable better coordination between the various sections of the laboratories.

6. ACTION PLAN

To gain the full benefit of the recommendations contained in this report, the Ministry of Health should direct the implementation of an action plan based on five parallel phases of work, as already illustrated in Section 2.5 of the Summary.

I. Enacting legislation. - The purpose of the first phase is to enact the legislation required to implement the National Health Policy as proposed by the Ministry of Health. This legislation will include new measures as well as modification of existing regulations.

II. Formulating supporting policies. - In the second phase, the Government will formulate and start implementing national policies in order to restructure the health sector as decided by legislation. These policies will include guidelines concerning social, economic, financial, technical and administrative aspects of the National Health Policy.

III. Building resources and systems. - The purpose of the third phase is to make the re-structured health sector operative, consistent with health and other national policies. To this end, the Ministry of Health will start mobilizing the human, financial and technical resources required to deliver the health services as well as re-building the necessary management and administrative systems.

IV. Implementing health programmes. - In the fourth phase, the competent units of the national health delivery system will develop and implement programmes to meet specific needs of the population in Lebanon. Some of these programmes may initially be implemented on a pilot basis to gain experience for wider application at a later stage.

V. Monitoring progress. - In the last phase, the Government and the Ministry of Health will monitor progress in implementing Phases I, II, III and IV and will, at major progress review points, evaluate the need for any corrective action. Such action should aim either at re-enforcing existing efforts towards agreed objectives or at establishing more realistic objectives and resource levels.

These five phases of work provide a framework for action, by (a) setting the scene for the recommendations made by the Assessment and Planning Mission with emphasis on 1983-86, and (b) helping the Government to identify the need for action in addition to these recommendations.

Detailed action steps, together with responsibility and timing for each phase, are outlined in Sections 6.1 - 6.5. The deadline of 6 May 1983 for the anticipated expiration of the Lebanese Government's emergency powers is particularly relevant for several actions in Phase I, Enacting Legislation.

The major steps of this proposed plan are consistent with the recommendations made by the Assessment and Planning Mission. The sequence and timing of the steps, however, are tentative and should be updated as warranted by changing circumstances or national priorities. Several action steps may need to be expanded in more detail to facilitate implementation at lower organizational levels and to establish major progress review points. Action concerning areas outside the scope of the mission's recommendations should also be included.

The overall responsibility for directing the implementation of the action plan obviously rests with the Government acting mainly through the Ministry of Health. The Ministry's National Health Planning Unit, however, should play a key role in facilitating the planning, coordination and monitoring of the five phases of work. Coordination is essential because activities concerning, for example, hospital facilities will take place in several of the parallel phases and are also related to work in other areas such as manpower training and primary health care programmes.

If requested, WHO will be prepared to assist the Ministry of Health in implementing the five phases of the action plan. Appropriate areas of possible assistance include participation in progress reviews and training programmes, advice on technical issues and on the important role of the National Health Planning Unit, and refinement of the action planning and review process.

6.1 PHASE I - ENACTING LEGISLATION

MAJOR ACTION STEPS	REF.	RESPONSIBILITY	TIMING	COMMENTS OR REMARKS
1. Formulate policy aims and principles of National Health Policy proposed by GNP December 1982 statement.	01, 02	Government	April 1983	
2. Enact legislation to establish Ministry of Health and Social Affairs by merging Ministry of Health with the health sections of Ministry of Labor and Social Affairs and the health services sections of Ministry of the Interior.	06	Government	By 6 May 1983	
3. Mandate the establishment of autonomous local Area Health and Social Affairs Authorities (AHAs).	07, 08	Government	By 6 May 1983	
4. Integrate the National Health Planning Unit into the formal structure of the Ministry of Health.	05	Ministry of Health	By end May 1983	
5. Strengthen existing drug legislation, including regulation and licencing of pharmacies and control of counterfiet or dangerous drugs.	48	Ministry of Health	By end 1983	
6. Enact or enforce legislation setting standards for the establishment, recognition and operation of health personnel training institutions, especially medical schools.	27	Ministry of Health and Minister of Education	By end 1983	
7. Identify the need for enacting or enforcing any other legislation relevant to the National Health Policy, especially in those areas not covered by the Assessment and Planning Mission's recommendations.		National Health Planning Unit of Ministry of Health	By end 1983	

* - Reference to recommendations in Section 5 of this report

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1. [illegible] the social and [illegible] to [illegible] for a "The Social Health Security System" - e.g., limits of funds available for re-imbursement; quality standards.	[illegible], [illegible], 12	[illegible]	[illegible]	
2. Conduct a national survey of all hospital facilities to provide policy guidelines for a national master plan concerning public and private hospital facilities.	44, 45	Ministry of Health	By end 1983	
3. Undertake national surveys of epidemiology, health knowledge, attitudes, practices, health manpower, and hospitals as input to national policies and health plans.	03, 04	National Health Planning Unit of Ministry of Health	Start mid-1983	
4. Formulate and start implementing any other national policies concerning social, economic, financial, technical and administrative aspects of the National Health Policy.		Government or Ministry of Health	By end 1983	

Best Available Document

6.3 PHASE III - BUILDING RESOURCES AND SYSTEMS

MAJOR ACTION STEPS	PARA.	RESPONSIBILITY	TIMING	COMMENTS OR CONTRAINTS
1. Develop and apply effective mechanisms to ensure adequate performance by hospitals, physicians and others employed or contracted to provide or manage health services.	15	Ministry of Health	1983-1984	
2. Appoint a team of experts to develop mechanisms for the proposed National Health Security System - e.g., cost re-imbursements, fee schedule.	11	Ministry of Health	By June 1983	
3. Develop and implement a national health manpower plan based on the recommendations concerning: - National health manpower survey - Long-range health manpower plan - Legislation enacted or enforced - Training facilities and programmes - Number of medical schools - Foreign medical graduates - National Medical Council - Salary policies	23-31	Ministry of Health	Start June 1983	
4. Implement effective management systems in specific areas such as personnel management, logistics, maintenance, finance systems, planning, etc.: - Management process for national health development - Management-by-exception approaches allowing senior managers to identify and resolve major issues - Standardized procedures for dealing with routine problems.	13, 14, 17, 16	Ministry of Health	1983-1986	
5. Identify the need for mobilizing additional human, financial and technical resources as well as any other management and administrative systems.		National Health Planning Unit of Ministry of Health	Ongoing	

6.4 PHASE IV - IMPLEMENTING HEALTH PROGRAMMES

MAJOR ACTION STEPS	REF.	RESPONSIBILITY	TIMING	COMMENTS IF CHANGED BY
1. Develop a master plan for health services delivery in the metropolitan area of Greater Beirut.	01, 17-22	National Health Planning Unit	Start June 1983 Complete mid-1984	
2. Give major emphasis to primary health care as basis for the health care system - as reflected by recommendations concerning:	09, 33, 41-43	Ministry of Health	Start mid-1983	
- PHC programme (high-risk groups, demonstration projects, etc.)				
- AHAs				
- Regional laboratories.	62			
3. Formulate and implement a maternal and child health programme.	34-40		1983-1986	
4. Re-activate Directorate of Public Health to implement preventive programmes and epidemiology services.	32, 33		1983-1984	
5. Develop a national master plan for public and private hospital facilities based on national survey and policy guidelines. In the context of this plan:	45, 46, 47	Ministry of Health	1984	
- Resolve key issues - e.g., number of beds required				
- Use re-insbursement for services provided as a means for expanding MoH control over private hospital beds.				
6. Implement programme to reduce immediate problems of pharmaceutical sector - as defined by recommendations concerning:	48-52	Ministry of Health	By end 1983	
- Drug legislation				
- National policy based on task force study				
- Illegal pharmacies				
- Counterfeit, ineffective or dangerous drugs				
- Inspectorate of Pharmacy Department				
- Number of drugs on the market.				

(Continued)

(Section 6.4 continued)

MAJOR ACTION PLAN	PARA.	RESPONSIBILITY	DATE	PROGRESS AT [illegible]
7. Formulate and implement programme to maximize contribution of pharmaceutical sector to National Health Policy - as reflected by recommendations concerning: - National Office of Drugs - Inventory and registration of all drugs - Further reduction of number of drugs - Studies of drug utilization. - National Drug Quality Assurance Laboratories in Beirut	53-56	Ministry of Health	1983-1985	
8. Implement a quality emergency medical care services network for Greater Beirut.	58	Ministry of Health	1984-1985	
9. Appoint a national organizing committee with the task of establishing a National Blood Transfusion Service.	60, 61	Ministry of Health	1983	
10. Establish an Advisory Committee for the Central Public Health Laboratories.	63	Ministry of Health	1983	
11. Identify the need for additional health programmes, specially in those areas not covered by the Assessment and Planning Mission's recommendations.		Ministry of Health	1983-1985	

6.5 PHASE V - MONITORING PROGRESS

MAJOR ACTION STEPS	REF.	RESPONSIBILITY	TIMING	COMMENTS BY GOVERNMENT
1. Update and complete details of Phases I, II, III and IV of the proposed action plan, at least for 1983-1984. - Recommendations made by the Assessment and Planning Mission. - Action concerning areas outside the scope of the mission's recommendations.		National Health Planning Unit of the Ministry of Health	By mid 1983	
2. Establish progress review schedule for each of Phases I, II, III and IV and for key areas of coordination (e.g., hospitals). - Major milestones or indicators of progress - Information required - Frequency and dates - Participants - Format of review reports.		National Health Planning Unit of the Ministry of Health	By mid 1983 and say, annually	
3. Conduct progress reviews according to schedules. - Examine two questions: is progress made as planned; is plan (objectives or resources) still valid? - Assign responsibility for any corrective action - Update action plan.		Ministry of Health	Ongoing	
4. Seek external assistance and advice, as appropriate, for any of the five phases of work. - From WHO - e.g., participation in progress reviews and training programmes, advice on technical issues and on the role of the National Health Planning Unit, and refinement of the action planning and review process. - From other UN and bilateral agencies - e.g., LRCS, UNDP, UNICEF, USAID, etc.		Ministry of Health	When needed	

Annex A to the Report of the February - April 1983

WHO/LRCS Health Assessment and Planning Mission to Lebanon

ABBREVIATIONS AND ACRONYMS USED IN THE REPORT

AHA	Area Health and Social Affairs Authorities
AID	United States Agency for International Development
ALICO	American Life Insurance Company (Beirut)
AUB	American University of Beirut
AUH	American University of Beirut Hospital
CDR	Council for Development and Reconstruction, Government of Lebanon
ERO	(WHO) Emergency Relief Operations
EMRO	WHO Regional Office for the Eastern Mediterranean
ILO	International Labor Organization
LL	Lebanese Pounds
LRC	Lebanese Red Cross
LRCS	League of Red Cross Societies
MCH	Maternal and Child Health
MEA	Middle East Airlines
Mission	WHO/LRCS Health Assessment and Planning Mission
MOD	Ministry of Defence
MOF	Ministry of Finance
MOH	Ministry of Health of the Government of Lebanon
MOHSA	Ministry of Health and Social Affairs
MOLSA	Ministry of Labor and Social Affairs
NHSS	National Health Security System (proposed)
NSSF	National Social Security Fund
OSD	Office of Social Development
PGS/MGT	Personnel and General Services / Administrative Management (WHO Headquarters)
PHC	Primary Health Care
TBA	Traditional Birth Attendant
UGCS	Cooperative of Government Civil Servants
UNDP	United Nations Development Program
UNICEF	United Nations International Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization

Annex B to the Report of the February - April 1983

WHO/LRCS Health Assessment and Planning Mission to Lebanon

MEMBERS OF THE WHO/LRCS MISSION TO LEBANON, COUNTERPARTS AND ROLES*

*Source: Ministry of Health, Lebanon, February 1983

WHO ASSESSMENT TEAM *

CONSULTANTS, COUNTERPARTS AND TASKFORCES

Consultants	Counterparts	Contacts and Task forces
1. Dr. Leonce Bloch Mission Leader Dr. William Gunn Coordinator	HE Dr. A. Mroueh Minister of Health Dr. Robert Saadeh Director General, MOH	Advisory Board to Minister
2. Dr. Arnt Meyer-Lie Health Planner Dr. Eugene Boostrom Systems Analyst	Dr. Antoine Farjallah Head of Hospitals and Health Centers	Task force on Hospital Systems
3. Mr. Willy De Geyndt Health Financing Dr. James Jeffers AID Consultant Dr. Paul Zukin AID Consultant	Dr. Fawzi Ma'touli Director of Medical Care Dr. Raif Nassif Advisor to Minister	Task force on Health Planning
4. Dr. Ali Khogali Health Manpower Develop.	Ms. Rakieh Bizri overseas Fellowships Mr. Badr Chartouni Head of Manpower Section	Task force on Health Manpower Universities and Colleges
5. Dr. Mohamad Wahdan Epidemiologist	Dr. Mohamad Mhanna Director of Preventive Medicine	Task force on Primary Care Epidemiologic Surveilla Bureau
6. Dr. E. Kalimo Primary Care Ms. Shephanie Simmonds Community Health Dr. U. Brlag Mat. & Child Health	Dr. Jamal Harfouche Advisor to Minister Mr. Mahmoud Hallab Head of Environment Mr. Ahmad al Khalil Health Education	Task force on Social Health Task force on Primary Care
7. Mr. D. Whiteley Hosp. and Health Facility	Mr. Abdallah Baltagi Head, Project Manage Management	UNICEF reconstruction EEC
8. Dr. Roy Choudhary Pharmaceuticals	Mr. Husni Chbaro Mrs. Fawzieh Nsouli Miss Therese Abu Maroun	Task force on Pharmaceuticals
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*Source: Ministry of Health, Lebanon, February 1983. Some name spelling corrected.

WHO HEALTH ASSESSMENT TEAM *

LEBANON

February 6 - March 4

I. Compesition

1. Dr. Leonce Bloche	Mission Leader -(USA) Experience as Resident Representative UNDP
2. Dr. William Gunn	Coordinator (Canada) Emergency Relief Operations - WHO - Geneva
3. Dr. Arnt Meyer-Lie	Health Planner (Sweden)
4. Dr. Eugene Boostrom	Health Systems Analyst (USA) US AID Officer
5. Mr. Willy De Geyndt	Health Financing (Belgium) World Bank Officer
6. Dr. Ali Khogali	Health Manpower Development (Sudan) Acting Director of Health Manpower Development WHO/EMRO
7. Dr. Mohamad Wahdan	Epidemiology (Egypt) Acting Director - Disease Prevention and Control - WHO/EMRO
8. Dr. E. Kalimo	Primary Health Care and Community Health (Finland) Primary Health Care - WHO/Geneva
9. Ms. Stephanie Simmonds	Primary Health Care (Britain) Research Fellow - Coordinator Refugee Health Unit - London School of Hygiene and Tropical Medicine
10. Mr. D. Whiteley	Hospital and Health Facility Planning (Britain) Cusdin, Burden and Howitt Architects (London)
11. Dr. Roy Choudhary	Pharmaceuticals and Health Supplies Management WHO/EMRO Regional Advisor on Pharmaceuticals
12. Dr. J. Leikola	Emergency and Blood Transfusion services Finland
13. Dr. H. Ørjasaeter	Emergency and Blood Transfusion Services Norway
14. Dr. U. Bolag	Maternal and Child Health (Switzerland)

*Source: Ministry of Health, Lebanon, February 1983. Some name spelling corrected

Annex C to the Report of the February - April 1983

WHO/LRCS Assessment and Planning Mission to Lebanon

ACTIVITIES AND DEVELOPMENT OF THE MISSION'S REPORT

The joint WHO/LRCS mission worked in Lebanon from the 6th of February until the 26th of February, 1983, with some members present for only part of that period. The Mission considered national health policy as expressed in a paper presented by the Minister of Health, H.E. Dr Adnan Mroueh, in December 1982. The mission considered that policy and the changes proposed in that same paper as it studied Lebanon's health sector and prepared the recommendations contained in the present report. Mission members obtained much information by reviewing documents and data made available by WHO, the Ministry of Health and the American University of Beirut. Members also conducted numerous interviews with Government officials, private and public health care providers and health services managers, and made observation visits to various health services agencies and to health services facilities in Beirut and in northern and southern areas of Lebanon. On those bases, members of the team developed a series of consultants' reports covering specific sub-areas of the health sector, including, in each case, an assessment of the situation in that sub-area and recommendations suggested for inclusion in this overall report of the WHO/LRCS mission. The mission then considered those consultants' reports and that of the financial analysis team and used them in developing a framework for Lebanese health sector planning and proposals for a series of actions to be taken in the period 1983 to 1986 to rebuild and re-establish the Lebanese health services and to improve their coverage and quality.

A delegation of mission members (Bloch, Bollag, Boostrom, DeGeyndt, Meyer-Lie, and Simpson) traveled to EMRO headquarters in Alexandria, Egypt, after a final meeting with the Minister of Health on the 26th of February. The delegation worked there until the 2nd of March, revising consultants' reports in collaboration with EMRO staff (including mission members Khogali and Wahdan) and discussing with them items for inclusion in the mission's report and recommendations. Because of the Ministry of Health's expressed need for early information on which to base immediate actions, a preliminary summary report was prepared by mission members in Alexandria and delivered to EMRO Director Dr Gezairy in Geneva on March 3, 1983 for transmission to H.E. Dr Mroueh and for Dr Gezairy's discussion of its contents with H.E. Dr Mroueh at a Ministers' conference in Abu Dhabi in early March.

After initial discussions of that draft summary at WHO headquarters, Dr Eugene Boostrom, a member of the mission, accepted the task of drafting a concise list of early action recommendations and the present report. He developed the draft of the urgent recommendations for early action with Dr Willy DeGeyndt of the World Bank in Washington and cabled it to WHO headquarters; that list was transmitted to H.E. Dr Mroueh by WHO cable from Geneva on March 25, 1983 (and retransmitted on April 5, 1983; See Annex P). Dr Boostrom drafted the present report in coordination with Dr James Jeffers of the University of Iowa, who was simultaneously writing the report of the USAID-financed health finance study team. Dr Boostrom returned to Geneva to revise the final draft with WHO headquarters personnel, including Dr S.W.A. Gunn (Chief Medical Officer, Emergency Relief Operations) and Dr G. Rifka (Director, Eastern Mediterranean Special Programme), and to develop a plan for action and follow-up in collaboration with Mr J.A. Jorgensen and Mr H.K. Larsen of WHO headquarters (PGS/MGT). The report was then delivered to H.E. Dr Mroueh in Beirut by Dr Rifka.

PN-AAN-195

ANNEX D to WHO/LRCS Health Sector Assessment "Reconstruction of the Health Services of Lebanon," 6 Feb - 13 Apr 1983

LEBANON HEALTH SECTOR FINANCING: ISSUES, PROBLEMS AND RECOMMENDATIONS

A Report Prepared by:
JAMES R. JEFFERS, Ph.D., (TEAM LEADER)

PAUL ZUKIN, M.D., M.P.H.

During the Period:
JANUARY 24 - MARCH 12, 1983

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The authors are delighted to acknowledge the personal accessibility of and receptivity to ideas as well as the candor exhibited by His Excellency Dr. Adnan Mroueh, Minister of Health and Labor and Social Affairs. Dr. Mroueh attended many meetings, several of them on weekends, and unceasingly gave the team the benefit of his knowledge and advice concerning all aspects of the study.

Special thanks are expressed to Miss Nevine Hammud, second year M.P.H. candidate, AUB, who worked closely with the team in attending various meetings, providing valuable comments and serving as interpreter and translator on numerous occasions. Our task could not have been accomplished without her.

Time and space do not permit mentioning individually all the GOL officials and private and public sector health professionals who provided valuable information and advice during the course of this study. We express our heartfelt thanks to all. The same is true of members of the WHO Health Sector Assessment Team, although special appreciation begs to be expressed on behalf of Mr. Leone Bloche, WHO Mission Leader, Dr. Eugene Boostrom, Dr. Arnt Meyer-Lie, Dr. David Pearce, and Dr. Willy De Geyndt, all of whom interacted closely with the USAID Health Sector Financing Study Team. The team expresses a great debt of appreciation to Dr. Ridah Wahid, Director of the NSSF, for many important and stimulating discussions and for offering data and staff assistance for purposes of this study. Sincere thanks are also extended to Mr. Salah Sawaya, Director of Statistical Services, and Mr. Gaston Cordahi, Chief Actuary, NSSF, for sharing information and advice.

The team was impressed with the interest, courtesy and high level of professionalism exhibited by the USAID Lebanon Staff. Letitia Butler, Assistant Program Officer, worked extremely effectively to set up the conditions for the study and provided excellent briefings and advice throughout its course. The executive staff, including Mr. Malcolm Butler, Director, Mr. William McIntyre, Deputy Director, and Mr. Kurt Shafer, Program Officer, exhibited keen interest and personal support for the study both during and after the period of the team's activities in Lebanon.

Mrs. Kris Loken, NE/TECH/HPN, AID/Washington, worked extremely closely with the team after her arrival in Lebanon, on February 7, 1983. She attended many of the meetings held between members of the team and Lebanese and WHO officials and made many valuable comments and suggestions. She also made many useful comments on various parts of the draft of the study prior to its completion.

The team would also like to express its appreciation to Miss Roudayna Sahyoun, Miss Irina Metni and to Miss Colette Badawi, all of whom typed various draft portions of the study in Lebanon. Special thanks goes to Mrs. Jean Skog who typed the entire draft on the word processor at The University of Iowa prior to its submission to NE/TECH, AID/Washington, in mid-March.

Appreciation is expressed to the American Public Health Association for providing technical and logistical support to Dr. James Jeffers, and to Trident Corporation for providing similar assistance on behalf of Dr. Paul Zukin. Dr. Jeffers expresses special appreciation to the Department of Economics, The University of Iowa, for permitting him to leave campus in order to further his professional development in undertaking this study on behalf of the Governments of the United States and the Republic of Lebanon.

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LEBANON HEALTH SECTOR FINANCING: ISSUES, PROBLEMS, AND RECOMMENDATIONS

JAMES JEFFERS, PH.D., TEAM LEADER, AND PAUL ZUKIN, M.D., M.P.H.

JANUARY 24-MARCH 12, 1983

EXECUTIVE SUMMARY

Purpose of Study

The purpose of the USAID Lebanon Health Sector Financing Study was to examine existing health financing mechanisms and policies, identify weaknesses and problems, propose alternative strategies for resolving problems identified, and make recommendations for follow-up technical assistance, if appropriate. The complete scope of work for the exercise is presented as Annex A to this report. USAID Health Sector Financing Study Team.

To accomplish the objectives of the study, USAID funded a two person team in Lebanon during the months of January and February, 1983. The team consisted of James Jeffers, Ph.D., Professor, Economics, The University of Iowa and Team Leader, and Paul Zukin, M.D., M.P.H., President, Health Management Group, Ltd., Piedmont, California. Dr. Jeffers arrived in Lebanon on January 24 and was joined by Dr. Zukin on February 7. Dr. Zukin departed Lebanon on March 1, followed by Dr. Jeffers' departure on March 12.

During the course of the team's activities in Lebanon, nearly 50 persons were interviewed and solicited for advice and information, including Lebanese officials, public and private sector health professionals, and university professors and researchers (see Annex B). In addition, the team worked closely with a WHO health sector assessment mission comprised of some 14 experts, sharing information and opinions freely concerning health sector problems, issues, and possible solutions. The WHO mission worked in Lebanon from February 6 to February 26, then went to Alexandria, Egypt to prepare its draft report at WHO's Eastern Mediterranean Regional Office. The two reports are complementary. The USAID report deals with details and substance of health sector financing problems, issues, and recommendations, while the WHO report deals with the entire spectrum of health sector problems and issues and provides a framework and recommendations for health sector planning and programming over the next several years.

Situational Analysis

The major findings of the USAID Lebanon Health Sector Financing Team as concerns the current situation pertaining to Lebanon's health system may be summarized as follows:

- The health care system is a complicated maze of fragmented and uncoordinated public sector and private sector health services delivery and reimbursement agencies.
- The private health services delivery sector is rich and powerful in terms of health manpower, facilities and resources and is operating virtually in an uncontrolled fashion. Legally set fee and tariff schedules reportedly are not followed. There is said to be substantial evidence of inflated billings and charging for services not rendered.
- Authority and capacity for public health services delivery is scattered among a plethora of ministries and autonomous public sector agencies, all of which are uncoordinated and under-funded. The public health services delivery sector has a very limited capacity to deliver services.
- The GOL committed itself long ago to a policy of making health services available to each member of the population regardless of ability to pay, and

yet the Government has only a meager capacity to supply health services directly to the population. This makes it necessary for Government to rely heavily on the private sector to deliver health services to the population for which costs are reimbursed by Government. As a consequence, the private sector receives roughly 80% of public sector revenue allocations as reimbursement for medical services that are supplied on behalf of Government.

- Medical facilities and manpower are badly maldistributed with the bulk of resources concentrated in the major cities, Beirut and Tripoli. In general, the South and the non-urban areas of Lebanon are medically underserved relative to the rest of the nation.
- Quality of care rendered by both the public and private sectors is comparatively low and is vitually unmonitored. For example, only four tissue committees are known to be operating in hospitals in Lebanon.
- Public facilities were badly damaged by the various circumstances of war. Wages and salaries paid to health professionals in the public sector are low by comparison with salary levels and rates of earnings in the private medical sector. Morale, discipline and incentives of health professionals and administrators in the public sector are very low.
- The public health care system is overly centralized, with little authority and autonomy existing at provincial, district, and community levels.
- Public sector medical cost reimbursement is scattered among several different agencies which cover different, but sometimes overlapping, segments of the population, provide non-uniform benefits, and receive revenues principally from assessments on wages and salaries. Wage and salary assessments are not uniform and appear to be inequitable.
- There is very little capacity in the GOL fiscal structure to tax and transfer so as to achieve equity. Tax bases consist predominantly of import duty, indirect tax collections, and wage and salary payroll assessments. Income tax collections account for less than 5% of total government revenues.
- The current Minister of Health is extremely knowledgeable, dedicated, and candid, and he is committed to resolving the various problems in Lebanon's health services delivery system. He has enlisted a cadre of equally dedicated, bright, and committed advisors to assist him in finding solutions to existing problems.
- The MOH, with USAID assistance, has mobilized several task forces of Lebanese experts to work out solutions to various problems and is in the process of developing and institutionalizing a health planning unit in the MOH, supported by technical assistance from AUB.
- The MOH has initiated a new policy to establish Area Health Authorities throughout Lebanon which will serve to decentralize as well as to regionalize health services delivery and administration. This policy would permit government and private health providers to cooperate in coordinating health resources available from national, provincial, and community levels to provide a comprehensive package of health services, including illness prevention and health promotion services, to population groupings of 100,000 to 200,000 persons.
- The MOH is seeking to upgrade and to expand the public sector health services delivery capacity. In this effort, it will emphasize hospitals in order to gain credibility for government in the eyes of the people and to compete with the private medical sector by offering quality health services at low cost, thus putting pressure on the private health sector to improve quality of care and to lower costs and prices.

Areas of Primary Focus of Study

The team focused primarily on selected areas of critical importance to accomplish the assignment. These areas are as follows:

- Estimating the magnitudes of major financial components of the health services delivery system, both public and private.
- Undertaking analyses necessary prior to making recommendations concerning the consolidation of all public sector financial reimbursement agencies into a single entity which might be called the National Health Security System (NHSS).
- Making recommendations concerning how a National Health Security System could function in terms of uniform reimbursement to providers and how it could be adequately and equitably financed from both public and private sector funding sources.
- Providing recommendations concerning the minimum base of data and information needed to monitor costs and quality of medical services provided in the medical services delivery system, both public and private.
- Undertaking a financial analysis of major policy options being considered, including an analysis and projection of costs associated with expanding the number of public sector hospital beds.

Major Findings and Conclusions

Analysis of the magnitude of the major financial components of the system reveals that last year the public sector spent roughly LL 551.0 millions on both directly providing services and on reimbursing a fraction of the costs of services supplied by the private health sector. Roughly 80% of total public sector spending was spent on private sector reimbursement. Total spending on health services in Lebanon in 1982 is estimated to have been at least LL 1.1 billion. Expert opinion offered by others suggest that this figure may be as high as LL 1.6 billion. It should be noted, however, that the lower estimate is consistent with a range of alternative estimates based on fragmented studies of villager's health expenditures made by villagers and on an extrapolation from what appears to be a rather solid study of health expenditure by income class in Lebanon conducted by the Ford Foundation in 1966; these estimates range from LL 1.26 to 1.22 billion respectively. In any case, total expenditures seem to be roughly 50% public and 50% private. Estimated drug costs as a component of total health expenditures range from 38 to 42% of total outlays on health.

After reviewing the weaknesses of the existing financial structure, the authors conclude that changes in financial mechanisms alone can do little to improve the health services delivery system. In order for the financial incentives that are incorporated into a system of financial mechanisms, policies, and procedures to assist in improving the performance of the health care system, there must be consistency between policies being implemented by both health care and financial decision makers. Thus health sector policies that are required in order for a recommended financial strategy to have maximum support effect must be clearly presented prior to specifying a cost effective financial strategy that is consistent with the allocation of GOL resources, demand and supply factors, cost containment, and other elements.

Recommended Health Sector Policy

Due to various factors, partly arising as a result of circumstances of war, Lebanon has a vigorous private health sector that is rich in resources, both physical and personnel. In planning, budgeting and forming policies for the future, the GOL should view both private sector and public sector health resources in the same light as potentially being mobilized toward assisting the government in meeting the health needs of the population. In doing so, in the

team's judgment, little emphasis should be placed on expanding public sector services delivery systems, and great emphasis and commitment should be devoted to regulating the private health sector in a fashion which brings it into a more effective partnership with government in achieving the nation's health sector goals.

There is need for public health facilities and publicly provided medical services to cater to the needs of the population for specialized services and to cater to the needs of the poorest of the poor. Reliance cannot be placed on the private sector to provide all of the health services that a nation needs, because there are not sufficient private incentives to do so. In the interests of placing the public hospital sector on a firmer financial footing, there is need to allow government hospitals to admit strictly private patients and to receive reimbursement for services rendered to eligible patients. However, there is no reason in principle, particularly from an economic perspective, not to rely on the private health sector to provide the bulk of medical care, if efforts are made to insure that the private health sector behaves responsibly.

Principal reliance on private sector provision of health services is appropriate in Lebanon, given the nation's strong commitment to private enterprise and the fact that 80-90% of health services are currently being rendered by the private health sector. However, greater emphasis should be placed on effective regulation that improves quality of service, medical practice and performance, and which serves to contain costs and to reduce duplication of facilities and other types of wastage throughout the system, both public and private. This policy is recommended in contrast to an apparent and contemplated GOL policy of expanding the public health care sector so it can more effectively "compete" with the private health sector. In the judgment of the authors, there is no economic justification for anything other than a modest and selective expansion of public sector medical facilities in the next five to ten years.

Equally important, there is no economic justification for Government to tolerate intimidation and dictation from a large and powerful private health sector which operates virtually in an uncontrolled fashion, serving individual and private interests which are largely divergent from the collective interests of the Lebanese people. The private health sector should be brought under control and induced to work more effectively on behalf of meeting the health needs of the nation. The authors admit that in certain selected cases political imperatives in the short-run may overrule objective economic and medical rationales. However, in the long run, economic and strictly medical realities must ultimately prevail. Thus, the general strategy recommended in this report places emphasis on regulation backed up and linked to a system of financial incentives which tends to harness public and private sector health resources to a common task, namely improving the health status of the population. Specific components of this strategy are presented immediately below.

Recommended Strategy

A. Consolidate and Unify Public Health Services Reimbursement

Public sector reimbursements for health services should be consolidated into one national agency to achieve greater uniformity of benefits, to increase equity of assessments required to fund operations, and to permit Government use of this amalgamated agency as a primary vehicle for giving positive or negative sanctions to public and private health sector performance, as appropriate. The resulting large and unified reimbursement agency, here called the "National Health Security System" (NHSS), would control the bulk of public sector funds available for payment for health services delivered in Lebanon, and thus could exert sufficient

power over the health services delivery system to improve its performance. This agency, the NHSS, is described in detail in subsection 4.2 of this report. As is emphasized in Subsection 4.2, the NHSS will take some time to form and thus it can extend coverage to the entire Lebanese population only gradually over the years to come.

B. Rehabilitate the Public Curative Sector

The GOL should concentrate for the next several years on rehabilitating existing elements of the public health services delivery system, including hospitals, clinics, health centers, and other outpatient facilities. As stated above, the GOL's contemplated policy to fill all gaps in the current system in order to correct the existing maldistribution of hospital facilities principally through the construction of new public hospitals, autonomous or otherwise, cannot be justified on economic grounds. Some additional public hospital beds possibly could be justified on politcal grounds which are beyond the scope of this study. However, even in this case, construction of additional hospitals should be preceded by a careful assessment of needs weighed against alternative modalities of delivering health services (i.e., health centers) many of which may involve reliance upon private sector facilities. In all cases the recurrent cost implications of newly constructed facilities must be carefully taken into account. (Section 3.0 of this report presents analysis on recurrent costs of hospitals.) In weighing the decision concerning whether or not to construct additional public hospitals to fill gaps determined on the basis of assessment of needs, the GOL should also consider the benefit/cost implications of subsidizing the private health sector to take the initiative to fill the apparent gap in the availability of needed services. However, it warrants stressing that rehabilitation of public sector health facilities should be given far greater emphasis than new construction.

C. Improve Public Sector Health Services Facility Performance

In addition to rehabilitation, the standard of performance of public sector health facilities must be improved to make them more acceptable to the population of consumers. As a minimum, the following will be required:

- Improve maintenance of buildings, plant and equipment.
- Develop and institutionalize a compensation plan sufficient to attract an adequate number of committed staff of medical professionals and other staff to public health facilities.
- Improve the quality of medical practice performance through developing and maintaining adequate patient records, tissue committees and professional peer review boards and committees to assess the appropriateness of the management of cases of illness (including diagnosis, treatment, discharge criteria and follow-up).

D. Strengthen the Financial Base of the Public Hospital Sector

The Autonomous Hospital Act of 1978 and the proposed Area Health Authority Legislation open the door for significant opportunities for strengthening the financial structure of the public hospital system. We support the thrust and principles of these two acts of legislation and urge the adoption of the following recommendations which the authors understand would be permitted under these legislative initiatives:

- Permit the newly constituted NHSS to reimburse public hospitals for basic medical care on the same basis as certified private hospitals.
- Allow public hospitals to admit private patients, when bed availability permits, and to receive payment for amenity services from private sources (i.e., out-of-pocket and private health insurance or both) over and beyond the level of reimbursement provided by the NHSS.

E. Strengthen Primary Health Care in both the Public and Private Health Sectors

Greater emphasis must be placed on primary health care services and especially on illness prevention and health promotion so as to eventually reduce the need for hospital and other curative services. This requires a change in the priorities and attitudes of practicing physicians in both public and private sector outpatient facilities and treatment units. Long-run solutions would include modifying medical teaching and training curricula to give a greater emphasis to preventive and community medicine, and the retraining of existing doctors in the interests of instilling an enhanced appreciation of the advantages of emphasis on illness prevention and health promotion in medical practice. However, these innovations will take time to develop and would have to be reinforced in connection with actual medical practice. The latter activity can be initiated now. The authors suggest that the following be required of physicians and other health professionals practicing in public and private outpatient facilities:

- Require the development and maintenance of adequate outpatient records that include as a minimum, a brief medical history, major physical findings, and a chronological record of diagnoses and treatments, including all drugs prescribed and all adverse reactions.
- Require the establishment and maintenance of standards of health promotive and illness prevention measures, including as a minimum, regular basic physical examinations for children and appropriate immunization programs for children and pregnant women.

F. Rectify the Maldistribution of Health Manpower Resources

Health manpower is currently concentrated in a few major urban centers. The Area Health Authority (AHA) proposed legislation would bring greater attention to making health services available more broadly to the entire nation. But in doing so, AHA directors and other managers of the system would encounter great difficulties in recruiting adequate numbers of health professionals to the public system, autonomous or otherwise. Therefore, in response to the Minister's request for advice in this area, the authors recommend either forced placement of medical personnel upon graduation, or the adoption of a compensation plan under the legislation giving degrees of autonomy to public sector institutions, as follows:

- Professional compensation would consist of a package of compensation with components including a base salary, earnings from medical practice (up to a maximum), housing allowances, education allowances for the professional and dependent children, and a pension that would not become vested until after a specified number of years of service.
- The package of compensation would be varied and made more attractive to professionals recruited to serve in areas currently underserved medically, and which are more remote and which offer fewer amenities than posts located in Beirut and other major urban centers.
- Compensation generated from performance of medical acts should be graduated so as to diminish gradually as the maximum allowed compensation is reached in the interests of reducing incentive to "over supply" medical procedures.

G. Foster Alternative Private Sector Initiatives

Establishing a broader financial reimbursement mechanism by itself will neither fully address the maldistribution of health care in Lebanon, nor improve the quality of services. In fact, it could further stress the system by driving up costs and lead to abuses.

The challenge will be to institute reforms and innovation in both the public and private sectors that will make health care better distributed, more comprehensive and of better quality. The private sector has efficiencies which are associated with the free enterprise system and these should be built on. Three strategies are suggested for consideration.

G.1 Link Prepayment with Comprehensive Health Care Delivery

A problem with traditional health insurance is that carriers have little incentive to control medical care costs. There is little or no control over the content or quality of care, which typically is fragmented.

A private sector alternative that addresses many of these problems is to link a comprehensive health care package to prepayment for a specified population to be served. Providers (physicians and facilties) are organized into a delivery system that guarantees to provide specified services for a pre-determined fee - hence they are at financial risk and have an incentive to maintain health and reduce costs. These entities, called "Health Maintenance Organizations" (HMO's), can have various arrangements among physicians, and between physicians and hospitals. Such an approach to health care delivery has been suggested for Area Health Authorities by Professor Bashur (9) and is recommended for consideration by the authors of this report.

Establishing an HMO requires careful assessment of the potential market and organizing necessary components including physicians, facilities and a health and management information system. A protocol for such an assessment is provided in Annex C of this report.

G.2 Expanded Commercial Health Insurance

Commercial health insurance presently plays a very small role in financing health services in Lebanon. In other countries (e.g., the United States), some commercial insurance firms recently have assumed a leading role developing innovative health care systems, including HMO's. An attempt should be made to interest a major insurance company with health care experience to survey the potential for such innovation in Lebanon. Companies like Blue Cross and Blue Shield in the United States are non-profit entities which could be approached to undertake such a survey and to make recommendations.

G.3 Upgrade the Management of Private Hospitals

Involvement of professional hospital management firms with private hospitals in Lebanon could lead to a higher level of patient care and reduced costs. This avenue should be explored.

H. Enforcement of Legal Tariffs

The uniform fee and service tariff for third class services should be published and managers of private and public facilities, as well as health professionals, should be fined or otherwise punished for violations and abuses, to insure compliance.

Need for Follow-up Support

In order to implement the recommended strategy, the GOL will need significant technical assistance in the following areas:

- Assistance in developing and maintaining standards of appropriate medical performance (i.e., tissue committee, peer review utilization committees, etc.) evaluation criteria, and methods of operation.
- Assistance in establishing a minimum base of data concerning costs and utilization of both private and public health providers.

- Assistance in developing and monitoring standards and procedures for inspecting, certifying, and classifying facilities according to quantities and qualities of services, staffing patterns, and other performance criteria.
- Assistance in exploring possibilities for private sector initiatives, including greater use of private health insurance and the establishment of HMO's.
- Assistance in linking the to be formed NHSS reimbursement activities to organization and establishment of AHA's offering comprehensive health care services at community levels.
- Assistance in establishing better auditing and cost control procedures, based on medical performance standards and guidelines, adherence to legal fee tariffs, and standards of cost appropriate for prospective reimbursement.
- Assistance in developing a national drug plan including developing a standard formulary emphasizing the use of generic drugs. Health providers whose services are paid for by NHSS reimbursement would be required to use this formulary. The drug plan would also improve procurement, control and distribution of drugs.

In conclusion, the authors recommend that a Financial Management and Medical Quality Assurance Project be designed and implemented by the GOL with support and assistance from USAID. This project would assist in consolidating all public sector medical cost reimbursement agencies into the NHSS. Technical assistance under such a project would be provided by a combinantion of long-term and short-term United States experts working cooperatively with local experts affiliated with the MOH, local universities, and what is currently the NSSF. The project would be implemented in close cooperation with the existing USAID assisted project establishing a planning unit in the MOH. Section 4.2 of this report presents a general description of a Financial Management and Medical Quality Assurance Project that would assist in forming the NHSS and thus provide a basis for implementing the major recommendations of this report.

LIST OF ACRONYMS USED IN REPORT

AHA = Area Health Authority
ALIC = American Life Insurance Company, in Beirut
ALOS = average length of patient stay in hospitals
AUB = American University of Beirut
AUH = American University Hospital at AUB
CDR = Council for Development and Reconstruction
DG = Director General
GOL = Government of Lebanon
HIP = health insurance plan at AUB
HMO = health maintenance organization
LL = Lebanese pounds
MCH = maternal and child health care
MD = medical doctor
MEA = Middle East Airlines
MOD = Ministry of Defense
MOF = Ministry of Finance
MOH = Ministry of Public Health
MOI = Ministry of Interior
MOLSA = Ministry of Labor and Social Affairs
NHSS = National Health Security System
NOE = National Office of Employment
NSSF = National Social Security Fund
ODS = Office of Social Development
OPD = outpatient department of a hospital
PH = public health
PHC = primary health care
PHI = private health insurance
UGCS = Union of Government Civil Servants, Mutuelle, or Cooperative of Government Civil Sevants
WHO = World Health Organization, United Nations

1.0 Introduction

In this section we review the purpose of this study, briefly outline basic characteristics of financial reimbursement schemes, and discuss major issues that need to be taken into account in analyzing and designing health financing schemes.

1.1 Background and Purpose of Study

At the request of the MOH, GOL, the USAID commissioned a study of health sector financing in Lebanon. This effort was coordinated with a broader health sector assessment conducted by the WHO, in collaboration of the League of Red Cross Societies, which was also conducted at the request of the MOH, GOL. These two teams carried out their respective assignments during the months of January and February, 1983. Although the respective reports of these two teams were prepared as separate documents, the two teams functioned virtually as a single unit, sharing information freely and interacting on various issues frequently during the course of the study.

The scope of work for the USAID financing study is included as Annex A to this report. Therefore it is only necessary to briefly summarize the purpose of the study here and to provide a brief review of the actual focus of activities.

Very generally, the purpose of the study is to review the health financing information that is available from both private and public sector sources; collect additional information when necessary and possible; identify problems and weaknesses in the financial mechanisms currently in place; propose alternative strategies for resolving problems identified; and ultimately, to recommend a cost effective financing plan compatible with the Lebanese context. Recommendations are to address issues of fiscal accountability, training, cost containment, demand-supply factors, and resource allocation and information system requirements. In addition, the team was to examine needs for follow-on technical assistance and to make appropriate recommendations.

1.2 The Team and its Activities

The team consists of two persons, James Jeffers, Ph.D., Professor, Economics, The University of Iowa, and Team Leader, and Paul Zukin, M.D., M.P.H., President, Health Management Group, Ltd., Piedmont, California. Dr. Jeffers arrived in Lebanon on January 24 and Dr. Zukin arrived in Lebanon on February 7. Dr. Zukin departed on March 1, and Dr. Jeffers departed to the United States on March 12, where he worked for five days finalizing the report in the United States. Three days were also spent by Dr. Jeffers in the United States working with Dr. Eugene Boostrom, M.D., Dr.P.H., Systems Analyst, WHO Mission to integrate this report into an appropriate annex to the broader WHO Report.

The USAID Health Financing Team divided the tasks between them according to their respective expertise and this report represents an integration of the results of individual efforts. In all respects the report represents a team consensus of the issues and recommendations.

In approaching the tasks outlined in the initial scope of work, the team encountered certain contextual realities that served to guide the team in accomplishing the assigned tasks, thus providing the precise focus of the study and the content of this report. Each of these elements is briefly discussed immediately below.

First, the team was confronted with the reality that health policy in Lebanon currently is undergoing rather drastic revision and evolution. This the team regards as a very positive thing, but it presented certain difficulties in terms of accomplishing the assigned tasks. The team was not able to cost-out the implications of clearly stated health sector policies and to suggest alternative financial strategies for accomplishing them. Rather, the team was invited to comment on, and in some cases analyze the financial implications of various policy proposals (e.g., the wisdom of expanding the number of public hospital beds). This made achievement of the team's tasks much more difficult, since it was necessary to cost-out the financial implications of various policy options in addition to recommending overall cost effective financial strategies required for achieving health sector goals.

A second contextual reality the team encountered was the high priority currently given by the GOL to the reorganization of the health delivery system generally, and to the reorganization of the entire financial institutional structure in particular. Of specific interest to the health finance team is the matter of the consolidation of public sector health cost reimbursement agencies (MOH, NSSF, UGCS, ODS, etc.). At the current time, these agencies are fragmented among various Ministeries (principally MOH and the MOLSA) and enjoy a mixed status of varying degrees of autonomy and direct line directorate relationship to the MOH or the MOLSA. The team was requested to suggest how the activities of these various agencies could be consolidated, how such a new agency would best operate in terms of its mandated activities, and where it should be located within government structure and operations. After wrestling with these matters for some time, the team came to the conclusion that it would be appropriate to make recommendations concerning the wisdom of forming a consolidated health financing agency, and to make recommendations concerning its activities and how best it could be financed. The consolidated health financing agency proposed in this report has been tentatively called the "National Health Security System" (NHSS). However, the team concluded that it would not be possible to make recommendations concerning where such an agency should be located within the structure of Lebanese Government (i.e., under the MOH, under the MOLSA, or an autonomous body under the tutelage of either Ministry, the Council of Ministers, etc.). The basis on which the team declined to make recommendations concerning the location of the NHSS is the recognition that such a decision ultimately must be made on political grounds and not on mere technical considerations. Such a recommendation lies beyond the scope of work of the health sector financing study team.

A third contextual matter that influenced the team's activities and thus the content of this report is the fact that due to war activities, no official data have been collected over the course of the last eight years. While there are several fragmented small surveys and studies of various sectors of the health delivery system, undertaken principally by AUB professors and students, no comprehensive set of data exists. Many of the special studies yield contradictory results, and virtually all are incomplete. Rather fundamental data are lacking concerning rates of inpatient hospital admissions, outpatient visits, disease patterns and trends, causes of death, costs of services, etc. As a consequence, the team spent a great deal of time systematically collecting, interpreting, and reconciling rather basic data and information describing the general and financial characteristics of the health services delivery system.

1.3 Areas of Primary Focus

As a result of the realities of the current state of affairs in Lebanon, the team focused primarily on selected areas of critical importance to accomplishing the assignment. These critical areas are as follows:

- Estimating the magnitude of major financial components of the health services delivery system, both public and private.
- Undertaking analyses necessary prior to making recommendations concerning the consolidation of all public sector financial reimbursement agencies into a single entity called the National Health Security System (NHSS) in this report.
- Making recommendations concerning how a National Health Security System could function in terms of uniform reimbursement to providers and how it could be adequately financed from both the public and private sectors funding sources.
- Providing recommendations concerning the minimum base of data and information needed to monitor costs and quality of health services provided in the health services delivery system, both public and private.
- Undertaking a financial analysis of major policy options being considered, including an analysis and projection of costs associated with expanding the number of public sector hospital beds.

1.4 National Reimbursement and/or Health Security Schemes

Since this report primarily deals with health sector finance, it is useful to briefly acquaint readers with various financial options that are available for national consideration. Currently in Lebanon, a major emphasis is placed on public sector reimbursements of the costs of services provided in the private health sector. Public Sector reimbursement schemes represent alternatives to conventional strict fee for services, i.e., private sector payment schemes in which private providers are paid by patients upon the receipt of services from out of pocket or from private health insurance sources of funds.

Essentially, there are three basic models of reimbursement and/or health security schemes from which to choose at the national level. Some salient features of each are briefly outlined below.

1.4.1 Private Health Insurance (PHI)

The first to consider is private health insurance (PHI). PHI is "packaged" by commercial carriers in terms of services eligible for reimbursement, exclusions, deductibles and co-payments that are required. Packages of PHI are marketed to individuals and groups of individuals, whereby insureds are required to pay a periodic premium, in order to be entitled to reimbursement for the cost of health services. Individuals or groups of individuals are "rated" in terms of their probable health service utilization needs, which is determined actuarially (according to age, sex, life style, employment, etc.). Probable health services needs are estimated on the part of the beneficiary population and probable health care costs are calculated. Exclusions, co-payment and deductibles are incorporated in the policy in the interests of curbing excess utilization of services. Premiums are set to cover the anticipated reimbursement payments on behalf of beneficiaries, plus a "loading factor", the latter including costs of administration and profits. Insurance carriers compete among themselves in terms of the packages of services for which reimbursement is eligible, exclusions, deductibles and co-payment required, levels of premiums charged, promotional efforts, etc.

PHI provides consumers an opportunity to substitute a series of fixed, generally small payments for payments of an uncertain nature that would arise in the future in the event of illness. Since illness is an uncertain event for any individual, financial payments for costs of illness would be uncertain, both in terms of timing and amount. However, illness in large populations is predictable, hence risk pooling can be accomplished by PHI carriers that have a large number of subscribers.

PHI involves elements of prepayment and risk-pooling. However, financial risk still rests with beneficiaries, since the role of the commercial insurance carrier is that of a financial intermediary. Insurance carriers simply collect premiums and pay out benefits, holding back a profit in the case of proprietory insurance carriers. Any rise in costs due to inflation or poor medical performance on the part of providers, both of which increase costs per unit of medical services required, are passed on to insureds in the form of higher premiums. Aggregate savings in the costs of medical care result only from economies of scale in management and possible cost containment measures taken by PHI carriers.

The United States has a large portion of its population covered by PHI, however cost control has not been very effective. Since profits are based on a mark-up percentage over and above costs consisting of payments to beneficiaries, proprietory insurance companies have no incentive to control costs. Non-profit carriers often are heavily directed by health providers and thus also have little or no incentive to control costs. Competitive pressures between and among providers are weak, due to the great variety of service packages that various carriers offer, thus making it difficult, if not impossible, for consumers to shop and to compare prices and value of coverage. Insureds included in group policies have no choice but to contribute to the company adopted insurance scheme. Since part of all of the premiums are offered "free" as a company fringe benefit, insureds in most cases have little or no incentive to closely examine or compare the company plan to theoretical alternatives.

1.4.2. Nationalized Health Services Systems

A second type of reimbursement and health, or health security scheme, is a nationalized health services system. These are rare in the Mid-East, Latin America, and Asia. However, they are common in Europe where countries have well-developed fiscal systems for collecting public revenues (e.g., Great Britain, Sweden, etc.), or in Communist countries in which ideologically the state must play the major role in the production of all things, including health services. Such a system is likely to be unacceptable in Lebanon on ideological and political grounds; thus little time and space will be devoted to discussing such systems in this report. However, it is important to observe that in the case of a nationalized health system in which all or nearly all health services are produced by the State, financial risk which arises in the event of illness is assumed by the State and not by the population of health care consumers. Also, since the State provides services directly to members of the population, costs of illness treatment originate directly in the form of health resource costs in the development and recurrent budgets of the State. Thus the cost burden is a public one that is financed through the capacity of the State to generate revenues.

1.4.3. Social Security Schemes

A third form of a national reimbursement and/or health security scheme from which one can choose is a national social security scheme. Such systems are

widespread in Latin America and Europe. A social security financed medical costs reimbursement system characterizes a significant segment of the United States health system, namely Medicare (reimbursement of the medical costs of the aged who are 65 years of age or older, which comprise roughly 12 percent of the United States population).

In its simplest form, such a system generates revenues principally in the form of taxes on wages and salaries, and reimburses health services costs on behalf of beneficiaries, usually consisting of current and retired wage earners and their dependents. However in more complicated settings like Lebanon, the State provides health services directly when possible (i.e., where public facilities are available and accessible), as well as reimburses private providers in cases where public medical services are not available.

To the extent that the State reimburses costs of private sector provided services, or provides services directly, a social security type of system is similar to a nationalized health service delivery system, in that financial risk arising as a result of illness in the beneficiary population is borne by the State rather than by consumers. The assumption of financial risk on the part of the State on behalf of beneficiaries provides a degree of health security to the population. The fact that such systems are financed in the form of wage tax assessments contributes to the idea that such systems are social security systems. The revenues available to finance such systems arise from essentially the same source as national pension, disability, industrial accident, and other social security programs.

1.5 Major Policy Issues

A social security type system of the sort that exists in Lebanon is very complicated. It involves elements of a nationalized system in which government provides services directly; third-party reimbursement on the part of governmental and autonomous governmental agencies; and a limited quantity of third-party private sector medical service transactions, the latter involving private health providers, consumers and private health insurance companies.

In view of the complicated nature of the Lebanese institutional structure, many substantial issues must be addressed. Those issues that are most crucial in the view of the authors of this study are discussed briefly below:

1.5.1. Equity

Possible equity issues exist on the side of entitlements of beneficiaries to direct service and/or reimbursement of the costs of health services rendered on the one hand, and exist in terms of levels of assessments generating revenue for the reimbursement system, on the other. As indicated above, there are several public reimbursement agencies (MOH, NSSF and UGCS). In addition, four ministries and/or autonomous agencies are involved in supplying health services directly (MOH, the Army, ODS, and Municipalities). As the analysis presented in Section 3.0 reveals, benefits available to covered beneficiaries of each agency are not uniform. Further, the analysis presented in Section 3.0 reveals that the tax assessments levied on insureds also are not uniform among the various beneficiaries covered by the agencies of concern.

1.5.2. Organizational Inefficiencies

The fact that both direct service delivery and coverage of population groups is fragmented among several different agencies suggests that a great deal of

duplication in administration, possible overlappings in coverage, and other sorts of organizational inefficiencies exist.

1.5.3. Lack of Uniformity of Quality of Care

Fragmentation between government agencies which are under the control of different ministries that are not coordinated is likely to result in considerable variation in the quality of care delivered for which reimbursement is provided. A fragmented system must be carefully monitored in terms of the quality of care provided by both the public and the private sectors. In the absence of uniform quality of services being provided, financial cost comparisons among the components of the system are meaningless, since it is not clear what exact services are being financed by each system component, and consequently by the system in its entirety.

1.5.4. Implications of Reimbursement Schemes for Health Services Delivery System Costs

Financial reimbursement schemes provide incentives to the individual components of the system, all of which ultimately have broad implications for the costs of the overall system.

1.5.4.1. Incentives to Providers

In general, fee for service or payment to medical professionals for procedures or medical acts performed is a piece rate reimbursement mechanism which encourages the output of medical procedures and acts. Regardless of the level of fee schedules or "tariffs", the signal is clear to providers that more money is earned if a greater number of medical acts are performed. The higher the fee schedule, the greater the incentive for medical professionals to perform a large number of acts or procedures. In sum, fee for service provides incentives for professionals to oversupply services. Insofar as utilization and/or medical ethical standards limiting the number of procedures to those justified on the basis of strict medical necessity are lacking, nothing exists to restrain physicians from oversupplying medical services except shortages of funds with which to pay for services.

Cost reimbursement, as compared to indemnity or prospective reimbursement to health facilities, encourages the oversupply and overutilization of health services and facilities.

1.5.4.2. Relationship Between Incentives and Apparent Efficiency

The paradox in all of this is that given the total number of reimbursed private sector admissions, increasing average length of stay (ALOS) will increase the number of patient days (equal to admissions x ALOS) thus raising the occupancy rate (equal to patient days beds x 365). A rise in the occupancy rate tends to make the private sector appear to be efficient, since efficiency often is viewed as directly related to rate of occupancy. Also, these same private hospitals can charge full actual costs per patient day of care rendered to private patients, treating these cases very intensively so as to keep the ALOS of private patients low. Thus, ALOS in private hospitals averaged over both publically reimbursed and private full-pay patients, on balance, may compare favorably by comparison with the ALOS of strictly public hospitals.

Most of the adverse incentive problems that are due to cost reimbursement can be blunted by: (1) paying medical professionals on salary; (2) paying a fixed reimbursement per case of hospitalization and paying a fixed fee per visit to

physician; (3) prospective reimbursement to hospitals and capitation payments to physicians, and (4) by setting utilization standards (i.e., standard lengths of stay per diagnostic group of a given degree of severity of illness, and degree of complication). Only if incentives to oversupply medical services are constrained, will true efficiency prevail.

I.5.5. Relationships Between the Public and Private Health Sectors

Government and private sector agencies have different goals, objectives and methods of operating, including how both cost-out resource utilization. Public and private sector goals and objectives are usually conflicting and different operating methods and costing procedures lead to differences in perceptions as to the comparative appropriateness and effectiveness of public facilities versus private facilities. The latter is particularly true when government is playing a substantial reimbursement role of privately provided services while also directly providing services itself.

Politically speaking, the major burden of responsibility for the health status of the nation is place on government, principally on the health ministry. However, the health ministry usually does not have control of the entire public sector health delivery establishment which often is fractionated among other ministries as is the case in Lebanon. Also, health as a Government responsibility usually receives a rather low priority in national budgets. Typically, the health ministry is under-funded relative to its burden of responsibilities, as compared to budget allocations received by other ministries. Thus, the health ministry is frustrated and has limited capacity to carry out its responsiblities.

The private health sector has no national responsibility for the health of the nation. Each practitioner and each health facility tends to feel a responsibility only for their own patients, staff and facility. While the private sector is composed of both voluntary (not-for-profit) and proprietory agents, both strive to maximize output of services in order to generate revenues with which to earn greater profits, increase the quality of services provided, or to reward staff better, as the case may be. An added objective of private medical teaching institutions is to enhance and to improve the quality and magnitude of teaching and research programs.

Given the different objectives and perceived responsibilities of public and private sector health agencies, there exists considerable rivalry and competition for funds, patients, staff and facilities. Generally the private proprietory sector, in which profit motives are a stong if not predominate alternative to quality and quantity service enhancement, tends to "skim the cream" of the medical market place. Proprietory professionals and institutions tend to treat the low cost but high fee cases of illness of minimum severity and complexity, leaving the more difficult cases to public facilities, voluntary providers, and medical teaching institutions. There is also a tendency to overcharge whenever possible, to charge what the market (comprised of ignorant patient consumers as compared to medical professionals) will bear, to proliferate medical technology in the interests of competing for patients, and to concentrate in urban population centers in which the most affluent patients reside. Urban settings also provide opportunities to refer difficult high cost patients to public, voluntary or educational institutions.

The response of ministries of health, in the authors' experience, is for them to resent the private sector, particularly the reimbursement of the costs of

privately delivered services, and to strive to expand the public sector's direct health services delivery role. Principal emphasis usually is placed on increasing the number of public hospital beds. Public hospital bed expansion is justified on the political ground of the necessity of enhancing the Government's image in the eyes of the people, thus increasing public credibility in the Government's ability to carry out its responsibilities. The greater the climate of political uncertainty existing, the greater urgency is felt to expand public hospital beds.

Part of the rationale for expanding public sector hospital bed capacity is the often mistaken belief that the public sector can operate hospitals at lower costs per unit of service. This may or may not be true, depending on the existing circumstances. In any case, two considerations must be taken into account. First, other things equal, if salary levels in civil service are lower than in the private sector, the Government will not be able to adequately staff its public facilities, unless professionals are forced placed or required to engage in service as a matter of law (conscripted). If ways can be found to get around low civil servant salaries, ultimately health professionals will be available to the public sector in adequate numbers, but only if at the margin compensation levels are equal to what these professionals can earn in the private sector. In short, compensation must be equalized between the public and private health sectors in the absence of regulation or law requiring health professionals to serve in public institutions.

It should be noted that job security, pension plans, housing allowances, medical practice payments and educational allowances are all items of compensation that in addition to salary, Government may include in a total compensation package in order to provide incentive for health professionals to become employed in the public sector. <u>However, the general point is that the private sector level of earnings sets the standard of compensation that the public sector must meet. Thus in order to meet its objectives, Government cannot remain aloof from the level and trend of earnings in the private health sector.</u>

Note the importance of cost control to Government. If Government is reimbursing private providers, cost control measures not only serve to reduce private sector abuses, they also serve to moderate the rise in the level of private sector compensation. Any extent that Government can slow down the upward trend in private sector levels of compensation will enhance government's ability to compete with the private sector for the services of health professionals.

A second consideration that must be taken into account concerning the issue of public sector versus private sector costs of health care delivery concerns capital or development costs. Typically, Governments divide budgets into capital (or development) cost accounts, and operating (or recurrent cost) accounts. Appropriation for the funding of these budgets is usually done separately, and often these budgets are even prepared by different agencies and through different procedures and processes. This is most unfortunate because of the intimate connection and relationship that exists between the two types of costs.

A current outlay on a hospital development project mandates a stream of recurrent costs equal to 30%-50% of the original cost of the capital facility (even 65%-75% in the case of highly sophisticated tertiary care facilities) depending on the levels of salaries, and other expenses involved in operating the institution. If recurrent costs are 50% of operating costs, the R/D (ratio of

recurrent costs to development costs) is .5. In two years, assuming no inflation, the sum of recurrent costs will equal the original development costs of the facility.

Since Governments divide or separate development and recurrent cost budgets, it is not uncommon for officials in operating ministries like health to ignore capital costs in comparing costs of operating public institutions and private institutions. Ignoring capital costs is tantamount to ignoring capital replacement funds that eventually will be needed in the future.

The need to replace capital is recognized by almost all private enterprise institutions including private health providers, particularly proprietory hospitals and clinics. In order to provide for replacement of capital in future periods, private firms calculate the annual amount of funds necessary to be set aside and invested, if possible in an earning sinking fund or reserve, which when accumulated over the period of useful life of the hospital or clinic will equal the amount needed to replace the facility. Inflation in future replacement costs also needs to be taken into account. The sum of recurrent costs and the annualized capital replacement costs constitutes total annual operating costs for the facility. Division of this total of annual operating costs by units of annual output of service, say total annual patient days, yields an average cost per patient day that must be covered in order to operate the facility and to replace it when it becomes obsolete in the future.

Summing up this discussion of public versus private sector costs, one must make clear that comparison of per unit costs include all elements of costs and are otherwise comparable. A presumed difference in costs per patient day between public and private institutions must be analyzed in depth prior to making any recommendations concerning the economic advisability of expanding the public medical sector as compared to sustained reliance on the private medical sector.

1.5.6. Decentralization and Autonomy

Typically, ministries of health are organized in a decending order of authority with the headquarters at the top, a tier of regional or provincial offices, and a final lower tier of district level offices. Also, typically, the MOH headquarters has a preponderent proportion of legal and administrative authority and control over budget as compared to lower levels. As a consequence, little discretionary authority and budget is available at lower levels, particularly at the district and community levels. The result is that major activities are often conducted in the capital city and in other urban areas while relatively little evidence of government attention or concern is given to health programs at district, municipal and/or community levels in non-urban areas. Dominant attention is often paid to curative care activities in hospitals located in major cities, with very little attention paid to illness prevention and health promotion or to primary health care (PHC) program activities at community levels outside metropolitan centers. Many countries are trying to decentralize MOH authority and control over resources, and to give greater autonomy to local levels of the health administrative hierarchy. Lebanon is no exception to this.

1.5.7. Ability of Government to Afford an Expanded Health Care Delivery System

The health sector must compete with other sectors for resources, e.g. defense, industry, education, housing, etc. Donors are likely to be very generous to Lebanon in gifts and concessionary loans for rehabilitation and some new capital development projects. It is possible that in certain circumstances,

funds may be made available to support recurrent cost needs. However, ultimately the recurrent cost burden of the public sector will be the responsibility of the GOL. A central issue concerns the ability of the GOL to bear the recurrent cost burden of a rehabilitated and expanded public health sector.

Costs are a major, if not the major, issue as concerns the Lebanese health services delivery system. Currently roughly 80% of public sector funds are spent on reimbursement of privately provided medical services. Any expanded reimbursement eligibility coverage of the population will reduce barriers to access to the health care system and will increase rates of utilization. It is alleged that the private health sector is abusing the reimbursement mechanism with overcharging, charging for services not rendered, and charging different public agencies for the same services on behalf of the same patient. Cost containment, under existing circumstances and those that must prevail if reimbursement mechanisms are expanded in terms of population coverage, is a major concern of this study.

1.6.0 Organization of the Remainder of the Study

The next section, Section 2.0, presents an overview of the general economy, describes the population served and the salient features of the health services delivery system. In this section and throughout the report we deal essentially with personal health services. These are made up primarily of curative or medical care services. No attempt is made to deal with community or public health services. The latter include environmental sanitation, sewage and waste disposal, communicable disease control, etc. While important, these are beyond the scope of the current study.

Section 3.0 describes financial mechanisms in detail, notes existing weaknesses and presents analyses of the various issues raised in Section 1.5 above. Section 4.0 presents our conclusions and recommendations, including a detailed outline of a consolidated public sector cost reimbursement agency (in this report called the National Health Security System) and describes how such an agency could be organized and operated.

The final section, 5.0, presents our recommendations concerning the need for follow-up technical assistance, including the general recommendation for initiating a Financial Management and medical Quality Assurance project. Such a project conducted over a three year period, in our opinion, effectively could implement the major recommendations offered in this report.

2.0 Background and Situational Analysis

In this section we briefly review the general economic characteristics of Lebanon and describe the volume and distribution of health sector resources. No attempt is made to describe the Lebanese health sector in detail, since that is done in considerable depth by the WHO Health Sector Assessment Mission.

The salient features of the health services delivery system are summarized as the basis for examining existing financial mechanisms and identifying problems and weaknesses. These are the subject of the next section of this report.

2.1 Overview of the Current State of the Lebanon Economy

Lebanon is a comparatively small country covering roughly 4000 square miles, with a population estimated at approximately 3.0 million, including some 2.75 million in Lebanon and 0.25 million working abroad.

Since 1975 the Lebanese economy has reflected the adverse consequences of its internal security problems. Traditionally, Lebanon has served as the financial and commercial center for the Middle East generally, and as a strategic stepping stone between the industrialized West and the developing , now oil-rich, Arab states.

With the outbreak of hostilities in 1974 and the continued disruptions, internal turmoil and destruction caused by numerous invasions since then, Lebanon's economy naturally has suffered. Per capita income estimated in 1981 at LL 8800 ($2200) has been roughly constant since then, measured in constant prices.

The rather stable level of per capita income stems in part from the mini-boom in construction that was required to reconstruct damage due to war. Other factors include those working abroad and consequent remittance of earnings (estimated at LL 9.0 billion, or $2.2 billion) and sizeable transfers of capital and operating funds from various countries sympathetic to Lebanon's plight. Thus while Lebanon has been running a sizeable trade deficit, balance of payments have registered surpluses in recent years due to transfers and capital inflows. This surplus was estimated at LL 3.4 billion ($850 million) in 1981 but is believed to have declined in recent years, due to the GOL's inability to control ports and thus tax items currently entering the country illicitly. This is costing the GOL an estimated LL 8-12 billion ($2-3 billion) annually at the present time.

2.1.1 Labor Force and Compensation

The economically active labor force is estimated at about 743,000 including 250,000 Lebanese who currently are working abroad. The 743,000 figure compares with an estimated 782,000 active labor force in 1970. The most recent year for which a breakdown of the composition of the labor force is available is 1974. The composition of the labor force in that year is presented in Table 2.1.1 below:

Table 2.1.1

Composition of Lebanese Labor Force: 1974

SECTOR	PERCENTAGE
Agriculture	19.9
Industry	18.7
Energy & Water	.9
Construction	6.4
Transportation & Communication	6.1
Commercial, Hotels & Restaurants	17.6
Services, including Administration	30.6
TOTAL (rounded):	100.0%

Subtracting 47,000, the number of government civil service employees, the estimated number of persons serving in the Army or public security forces, 35,000, and the 250,000 Lebanese working abroad from a total active work force of 743,000 yields 411,000 persons comprising the non-government civilian work force.

Total payroll of civil servants plus military and public security forces, 82,000 persons, is estimated at LL 2.3 billion in 1982. The wage bill of domestic civilian non-government employed individuals, 411,000 is conservatively estimated at LL 8.4 billion ($2.1 billion). The latter estimate is based on LL 20,400, the estimated average annual wage of 215,000 employees currently covered by the NSSF (which includes a lower proportion of professionals, marrieds, and older persons than the civil service). Neither the Civil Service data nor the NSSF data include income from the self-employed. Thus the LL 8.4 billion figure representing the wage bill of the domestic private sector work force is drastically underestimated, but represents the best estimate that is available.

2.1.2 Government Fiscal Activities

For purposes of this study, Government fiscal activities are extremely important. The GOL traditionally has incurred significant annual deficits. However, in the recent years annual budget deficits have been rising at an accelerated rate. In 1981 the budget deficit was officially recorded at LL 1.4 billion ($335 million) representing roughly 25% of a total budget of LL 5.6 billion ($1.4 billion). However in 1982, the budget deficit was officially recorded at LL 2.75 billion ($688 million), representing roughly 47% of total expenditures of LL 6.3 billion ($1.6 billion). The 1983 budget deficit is predicted to be even higher, both in magnitude and as a proportion of total expenditures.

Budget deficits are financed in the main through the sale of government obligations to the Central Bank and to commercial banks, thus contributing to an expansion in the domestic money supply which is highly inflationary. Inflation has been estimated to be running at 20% annually.

Allocations under the state budget for 1982 are shown in Table 2.1.2 below.

2.1.3 Ministry of Health Budget

As can be seen from Table 2.1.2 below, the MOH was allocated roughly LL 240 million ($60 million) out of a total State budget of LL 6.3 billion ($1.58 billion) in 1983. The MOH received roughly 3.8% of the total State budget. Actual expenditures as reported by the MOH in 1982 were LL 234 million ($58.5

Table 2.1.2 - Allocation Under the 1982 State Budget

(In Lebanese Pounds)

	Section 1	Section 2(a)	Section 2(b)	TOTAL
Presidency of the Republic	2,828,800	175,000	-	3,003,800
Parliament	25,388,400	730,000	-	26,118,400
Premiership	119,532,300	15,875,000	-	135,407,300
Ministry of Justice	52,441,800	-	-	52,441,800
Ministry of Foreign Affairs	84,463,700	-	-	84,463,700
Ministry of Interior	273,446,200	65,275,000	50,000,000	388,721,200
Ministry of Finance	85,110,700	4,530,000	-	89,640,700
Ministry of Defense	769,354,500	391,260,000	85,000,000	1,245,614,500
Ministry of Education & Fine Arts	938,799,600	11,025,000	31,000,000	980,824,600
Ministry of Public Health	210,075,100	30,395,000	-	240,470,100
Ministry of Labor & Social Affairs	94,286,400	51,512,000	-	145,798,400
Ministry of Information	30,342,300	1,200,000	20,000,000	51,542,300
Ministry of Public Works	75,476,700	636,600,000	384,345,000	1,096,421,700
Ministry of Agriculture	16,692,400	58,951,000	-	75,643,400
Ministry of Economy	147,258,000	155,000	-	147,413,000
Ministry of Posts, Telegramme & Telephone	34,787,200	14,950,000	-	49,737,200
Ministry of Electric Power & Water Resources	12,766,000	104,602,000	-	117,368,000
Ministry of Tourism	33,293,300	12,302,500	-	45,595,800
Ministry of Industry & Oil	3,053,700	665,000	-	3,718,700
Ministry of Housing	6,506,500	2,087,500	-	8,594,000
Debts Outstanding	481,728,000	-	-	481,728,000
Reserve	829,733,400	-	-	829,733,400
Total	4,327,365,000	1,402,290,000	570,345,000	6,300,000,000

Source: Ministry of Finance, 1982

MOH reimbursement to private hospitals are laggging by about LL 10 million ($2.5 million) per year due to late billings, disruptions in the ability of government to make disbursements due to circumstances of war, and disputes concerning charges and billings.

Historically in recent years the MOH has received from a high of 4.1% (1966) to a low of 2.3% (1978) of the state budget. The MOH received a 2.8% share of the state budget in 1980 and 1981, respectively. Thus the current 3.8% budget share awarded to the MOH represents a recent upturn in MOH budget, which for the most part is due to increases in funds required for reimbursement of private sector rendered medical services.

Of the total of LL 234 million ($58.5 million) spent by the MOH in 1982, LL 160 million ($40 million) was spent on private sector reimbursement, (with approximately LL 10 million worth of private sector claims still pending). This leaves the MOH with a maximum of only LL 74.0 million ($18.5 million) over and above funds needed for private sector reimbursement, with which to support public health, training, and direct medical services delivery programs, and general administration.

When MOF officials were questioned concerning the prospects for increased outlays to the MOH beyond current percentage levels, the response was not optimistic. Other competing demands for public funds (particularly military outlays) were listed as being of high (but not necessarily higher) priority. In addition, the current difficulties the GOL is encountering in raising revenues in the face of dwindling import tax revenues were also mentioned.

It may be noted that the GOL revenue structure is not particularly elastic with respect to increasing needs for funds. Income taxes constitute less than 5% of total revenues, and principal reliance is placed on import duties and indirect taxes. Accordingly, there is a limited capacity for the GOL to generate additional revenues to meet all of its needs for recurrent spending, hence the traditional and recently accelerated resort to deficit financing. The matter is succinctly stated in the following quotation (39.p.76):

> Lebanon's fiscal structure is notorious for its imbalances. Despite recent legislation to correct for these ....., state institutions responsible for collecting revenues and enforcing the new legislation are largely incapable of doing so. Thus, even direct taxes, including income tax only contributed to 18.6% of revenue in 1980 against 23.7% in 1979. Income tax alone, represented only 3.9% of the ordinary budget for FY 1980.

2.2 Brief Review of Medical Services Delivery System and Population Served

2.2.1. Population Characteristics

The total population of Lebanon is estimated at 3.0 million persons, of which 2.737 million were estimated to be living in country in 1980. The distribution of population among provinces is given in Table 2.2.1 below:

Table 2.2.1

Population by Province, 1980

Province	Population	Percentage
Beirut	664,000	24.3
Mt. Lebanon	1,046,000	38.2
North Lebanon	458,000	16.7
Bekaa	255,000	9.3
South Lebanon	314,000	11.5
Totals:	2,737,000	100.0

Source: National Employment Office, Government of Lebanon.

Lebanon is one of only nine countries that has not conducted a recent census; the most recent census was conducted in 1932. However, Khalaf (5) has estimated demographic characteristics including age, distribution and trends in fertility and mortality based on a sample of 30,000 households undertaken in 1970 by the Lebanese Ministry of National Planning, followed up by a 10% sub-sample in the summer of 1971.

Summarizing Khalaf's findings, Lebanon is characterized by a population that exhibits a high dependency ratio. Nearly 42% of the population is under 15 years of age and 54% is under 19 years of age. Yet nearly 5% of the population is 65 years of age or older as compared to an estimated 3.6% in other Arab countries (5, p.13). Females comprise roughly 18.4% of the economically active population as compared to only approximately 8.6% in the remaining Arab world. The average age for first marriage is 28.5 years for males and 23.2 years for females. Many observers feel that due to war, in recent years the average age for marriage on the part of both males and females has been steadily advancing.

Lebanese crude birth rate is estimated at 34 per 1000, with a general fertility of 144 per 1000 women. Life expectancy at birth for both sexes is estimated at 64.2 years. Infant mortality is estimated at 65 per 1000 living children. The survival rate of children to the age of 5 years shows a definite trend in favor of females.

2.2.2 Principal Diseases and Illnesses

Unfortunately, in recent years the statistics section of the MOH has not had sufficient staff to conduct regular surveys of the incidence and prevalence of disease. Most recent data available pertain to the year 1974. Even in these data it is believed that the incidence of disease is substantially under-reported. Table 2.2.2 below, from Ministry of Health data, lists the communicable diseases reported in 1974.

Table 2.2.2

Reported Communicable Diseases in Lebanon: 1974

Diseases	Percentage
Typhoid and paratyphoid	36.5
Respiratory tuberculosis	30.7
Schistosomiasis	8.65
Viral hepatitis	6.26
Non-respiratory tuberculosis	5.44
Poliomyelitis	3.36
Cerebrospinal meningitis	2.64
Alimentary intoxication	2.40
Dysentery	1.22
Malaria	1.22
Others (diphtheria, rabies, tetanus, etc)	1.51
TOTAL (rounded):	100.0%

Source: Ministry of Health, Reference 31, pp. 31.

The majority of diseases in the table above are preventable. Not shown are the degenerative diseases, i.e., heart disease, cancer, etc. Dr. N. Armenian, Dean of the School of Public Health, AUB, an epidemiologist, observed that Lebanon is rather unique as a nation. On the one hand, it exhibits a disease pattern similar to that characterizing developing nations but on the other, a sizable segment of the population exhibits a pattern similar to that of highly developed industrialized nations. Unfortunately, data were not available to the team with which to illustrate this phenomena.

2.2.3 Hospital Beds

The actual stock of acute general hospital beds available in Lebanon is not known with certainty. Many so-called hospitals consist of extremely small overnight apartment clinics which would not qualify as hospitals, if strict certification standards were enforced. Also enumeration efforts have been stalled by the war, and thus the data available are largely based on 1977 surveys that have been updated on the basis of fragmented studies conducted since that time.

As of December of 1982, MOH authorities report (3, pp. 17-18) that in 1974 there existed a total of 112 acute general private hospitals in Lebanon, of which two were university administered, 12 were operated by voluntary organizations, and 98 were proprietary (for profit) institutions. In addition, there were two military hospitals and 21 MOH public facilities yeilding an estimated total of 135 acute general hospitals.

The distribution of non-military hospital beds according to public or private ownership and province and the ratio of beds per 1000 persons for 1974 is presented in Table 2.2.3 below:

Table 2.2.3

Hospital Beds by Ownership, Province and Ratios/1000 persons - 1974

	Government	Voluntary	Private	Total	Beds/1000
Beirut	220	1093	1339	2652	4.4
Mount Lebanon	328	420	617	1365	1.6
North Lebanon	260	115	694	1069	1.6
South Lebanon	385	-	287	672	1.2
Beka'	350	-	105	455	1.1
TOTAL:	1543	1628	3042	6213	2.0

Source: MOH, taken from 3, pp. 17-18.

Table 2.2.3 above shows a dominant concentration of hospitals in Beirut, while the remainder of the country and particularly South Lebanon and Bekaa are relatively underserved.

Since the war, Lebanon is believed to have lost hospital beds. The current number of acute general hospitals beds available is estimated at roughly 6400, 1200 public and 5200 private sector beds, respectively. While the 1200 public beds are not fully operational at this time due to circumstances of war, they will be made operational in the near future. Also, the 5200 private sector hospital bed figure excludes an estimated 514 small "fly-by-night" clinic beds that would not meet a reasonable standard of hospital care, if certification were strictly enforced.

In addition to acute general hospital beds, it is believed that roughly 3400 private hospital beds for chronically ill patients currently exist, of which the MOH contracts for the use of 2500, yielding a total of approximately 9800 hospital beds of all types in Lebanon. Assuming a population of 3.0 million, the ratio of hospital beds per 1000 persons is approximately 3.2. Assuming that the population currently actually served is roughly 2.75 million, yields a ratio of 3.5 beds per thousand population.

2.2.4 Dispensaries

The distribution of dispensaries in 1977-78 by type of ownership is presented in Table 2.2.4.

Table 2.2.4.

Distribution of Dispensaries by Type of Ownership, Lebanon, 1977-78

	No.	%
1. Government		
Army	3	1.0
Ministry of Health	16	7.0
Office of Social Development	61	27.5
Municipality	10	4.5
Subtotal	90	40.0
2. Private		
Lebanese Red Cross	22	10.0
Community & Families	48	22.0
Political groups	19	9.0
Religious groups	26	12.0
Caritas	3	1.0
Movement social	4	1.5
Other (mainly families)	10	4.5
Subtotal	132	60.0
TOTAL	222	100.0

Source: International Red Cross - UNICEF Survey, Lebanon, 1977-78, taken from (3, p. 22).

The numbers of dispensaries appear to be very low. If dispensaries serve as an index of PHC availability and/or first contact medical care, the existence of such a small number of dispensaries suggests a lack of emphasis on this type of health care service availability.

With respect to dispensaries, little uniformity in terms of size, service, activities, and staffing patterns exist. Thus no attempt is made to show their distribution among provinces, since doing so would be misleading. The staff of dispensaries is heavily dominated by physicians. Indeed, MOH officials agree that there are more physicians than nurses in Lebanon and this is reflected in the staffing of dispensaries. The next section presents data reflecting the total numbers of various categories of health personnel and the distribution of physicians among provinces.

2.2.5 Health Personnel

Table 2.2.5.1 below presents number of the various categories of health personnel and numbers per 1000 population believed to exist in Lebanon in 1977.

Table 2.2.5.1

Health Personnel in Lebanon, 1977

Population	Number	Per 1000
Doctors	2000	1/1080
Dentists	932	1/3480
Pharmacists	894	1/3635
Nurses	1514	1/1625
Nursing Aids	998	1/3256
Midwives	500	1/6500
Physiotherapists	96	1/33854
Laboratory technicians	200	1/16250
X-Ray technicians	20	1/162500
Sanitarians	200	1/16250

Source: Ministry of Health, October 1977, taken from 3, p.23.

Table 2.2.5.1 shows that physicians comprise the largest single category of health personnel in Lebanon. The ratio of physicians to 1000 population appears very favorable, even by comparison with many highly industrialized nations. However, severe shortages exist in the number of nurses and nurses aids and in other categories of health personnel.

In 1982 the National Employment Office completed a national study of the numbers and distribution of physicians in Lebanon. Table 2.2.5.2 presents a summary of the number of physicians, percentage, and physicians to population ratios by province in 1980. These data are based on the National Employment Office study completed in 1982 (35).

Table 2.2.5.2

Distribution of Physicians, Percentages, and Ratio to Population, by Province: 1980

	Beirut	Mt.Leb.	N.Leb.	S.Leb.	Bakaa	Total
Number of physicians	1264	580	233	168	159	2404
Percentage of total	52.6	24.1	9.7	7.0	6.6	100
Ratio of physicians to population	1:525	1:1803	1:1965	1:1869	1:1603	1:1138

Source: National Employment Office, Government of Lebanon (35).

Table 2.2.5.2 again shows a concentration of health resources, in this case physicians, in Beirut. Bakaa appears to be in a better position with respect to the remaining provinces. Areas that appear to be most greatly underserved are North Lebanon followed closely by South Lebanon. Since physicians dominate the medical sector generally and comprise the largest component of health personnel in Lebanon, we would expect the distribution of remaining cadres of actively

working health professionals to follow roughly that of physicians.

A matter of great concern to Lebanese health officials is that increasing numbers of licensed physicians are graduates of foreign medical schools which are not highly regarded. While Lebanon currently enjoys a high ratio of physicians to population, increasing dependence in the future on marginally trained medical graduates poses a serious problem for the quality of medical care that will be available to Lebanese citizens in the future.

2.2.6 Other Health Sector Medical Resources

2.2.6.1 Training Institutions

The following material concerning training relies heavily on the Health Manpower and Training Annex to the Report of the February 1983 WHO/LRCS Health Sector Assessment and Planning Mission to Lebanon. Some of the major findings of that report are summarized below.

Currently there are two accredited medical schools in Lebanon, AUB and St. Joseph Faculty. In addition, St. Joseph offers B.S. training in pharmacy and dentistry. The Faculty of Health Sciences, AUB, offers B.S. degrees in environmental health, bio-statistics and laboratory technology. Master's level training is offered at AUB in epidemiology, general hospital administration, and health services administration.

Both AUB and St. Joseph Universities have B.S. programs in Nursing (AUB also offers an Associate Degree program). There are at least seven other nursing schools in Lebanon, most of which are sponsored by religious groups and charitable organizations. Three universities (AUB, St. Josephs, and Lebanese University) offer training programs for laboratory technicians, with AUB offering the only B.S. degree in this area. Although now closed due to the war, the MOH initiated a diploma program in the School of Sanitarians (Tripoli).

In summary, Lebanon already has a fairly credible level of resources for training health personnel. Two medical schools in addition to AUB and St. Joseph's are operating in Lebanon, but as yet have not been accredited. Plans are also in progress to offer M.S. and Ph.D. nursing programs in the future.

2.2.6.2 Pharmacies, Drug Agents and Pharmacists

Drug acquisition and control is a big problem in Lebanon. It is estimated that at least 8500 general types of drugs are used in the country, many of which have never been approved legally. There are an estimated 502 drug firms that wholesale drugs obtained from an estimated 95 drug (import) agents. Only 17 local drug manufacturing firms exist. There are an estimated number of 1125 legal pharmacists licensed in Lebanon. While there are 296 legal pharmacies, an estimated number of 320 illegal pharmacies are known to be operating in Lebanon. Mark-up profits are as high as 143% over acquisition costs and drug costs are estimated to constitute 38-42% of total outlays on medical services in 1982 (see Section 3.5 of this report).

2.2.7 Important Policy Measures of Special Relevance to this Study

Health sector policy is stated clearly in the Minister's speech delivered in the United States in December of 1982. This policy is also succinctly summarized in the Executive Summary of the Report of the February 1983 WHO/ LRCS Health Sector Assessment and Planning Mission to Lebanon. In the interests of not duplicating the work of others, the authors do not attempt to summarize Lebanon's

health sector policy here. However, two policy measures, one old and one new, are particularly relevant to this report and thus they are briefly summarized below.

2.2.7.1 The Autonomous Hospital Act of 1978

The act proposes to establish autonomous public hospitals, one for each province. The act also allows for extension of the autonomous mechanism throughout the provinces to all MOH health facilities and services.

A board of directors is created which is responsible for the autonomous hospital system, but which reports to the Minister of Health. Funding for the hospitals comes primarily from the MOH. Seven members sit on the board. Members include a representative each from St. Joseph's and AUB, the Director General from both the MOH and the NSSF, two representatives from the Lebanese Order of Physicians and one "expert". The board meets monthly.

Also meeting monthly is a separate board responsible for each hospital. This board consists of one professor each from St. Joseph's and AUB medical schools and two local citizens with college degrees.

Under the Act, hospitals can hire and fire employees and can set compensation for physicians and other employees essentially as they see fit. Hospitals may charge private patients directly for services.

To date, no autonomous hospitals have been implemented under the Act. However, with or without modification the Act could be used as the umbrella arrangement under which MOH hospitals could be given autonomy and flexibility to restructure their operations consistent with the needs of a revised health care delivery system.

As presently written the law appears to have many flaws. These are:

1. The boards meet infrequently and their staffs serve only part-time. There is insufficient management control and accountability.
2. By extension of various MOH facilities and services, the general board of directors could control the entire MOH health system, by-passing various MOH directorates and experts. As a result, coordination and integration of MOH facilities, services and referral mechanisms could be lost.
3. Employees under contract to the MOH might be redundant if other workers were selected to staff an autonomous hospital. Under existing civil service regulations the MOH would have to keep these redundant workers on its payroll.

These problems aside, the law presents many opportunities for the public hospital system to become more financially secure and to be able to compete with the private sector for the services of health professionals. While strictly speaking no hospital is currently operating according to this law, the Batroun Hospital is operating under a semi-autonomous arrangement with the NSSF. The Minister has been interested in the possibility that the Batroun Hospital might serve as a model for a reorganized public hospital system. Thus the experience of the Batroun Hospital is highly relevant to the objectives of this study.

2.2.7.1.1 Batroun Hospital

Batroun Hospital is a 75-bed acute care facility with an outpatient service and serves as a regional renal dialysis center. It is currently running a surplus over costs on its operations. Yet its daily room charge is low relative to other hospitals offering a similar level and quality of service.

The hospital is unique in many ways. First, it is the only acute facility in a community with a catchment population of at least 60,000. Second, it functions as a MOH-owned institution, leased to the NSSF and operated as an autonomous hospital with a board of directors. The board consists of five members who meet weekly. The hospital is managed by a trained administrator.

As an autonomous institution, the hospital can hire and fire and set wages different from those which the MOH pays. In fact, the hospital wage scale seems to be similar to that of the Ministry for nursing personnel. Compensation of the laboratory, however, is different. The director, a full-time salaried employee, earns LL 8,000 per month, plus 15% of all receipts for laboratory service over LL 15,000 per month. His total monthly earnings were not revealed. Presumably the purpose of the incentive arrangement is to stimulate commitment and productivity. However, without strict controls, one could envision that the incentive arrangement could very easily stimulate abuses and over-utilization of services.

The physicians on the staff are basically in private practice who use the hospital to hospitalize their private patients. They are also assigned patients on a rotation basis who present to the hospital for care, referred from the MOH, NSSF, or the UGCS.

For patients who are covered by a government related reimbursement scheme, physicians receive 100% of the applicable fee as set by the acts schedule (85% form the reimbursing agency and 15% from the patient). The hospital collects both the reimbursement and patient components and pays the physicians directly, if this is what the physician elects, retaining 10% of fees as a collection charge. If preferred, physicians can bill patients directly for reimbursement, and in this case the physician keeps the full amount of fees.

By action of the board of directors for a private patient (i.e., one with no public sector reimbursement coverage), physicians may charge twice the scheduled amount for medical acts and procedures. Previously they charged three times the scheduled tariff fees, but this level of charging was rescinded by the board of directors.

Initially it had been the team's impression that Batroun Hospital had an incentive system for physicians. This does not appear to be the case. Monthly earnings of the physicians are around 20,000 LL. This is said to be about one-fourth of that earned by comparable doctors in Beirut. However, the Batroun physicians have no overhead, while most Beirut physicians are said to have an overhead of about 30%.

In discussing the adequacy of physicians earnings with Batroun officials, it became clear that there are insufficient hospital beds in the Batroun area to meet the demand. The hospital operates at 90% occupancy and at this level makes money. One surgeon reported that the limitations on beds reduced his average work day to around four hours.

To summarize, in the team's view Batroun Hospital is a unique case. It is not at all representative of a MOH-related hospital operating as an autonomous entity competing effectively with hospitals in the private sector. There does not seem to be an incentive scheme to compensate physicians that differs in any significant way from that common to private practice.

Presumably the physicians accept the working conditions for several reasons. First there seemed to be genuine commitment to the facility and to the community. One sensed that they did not feel that they were being taken advantage of in the way that some physicians are by fee-sharing with private hospitals. Second, the compensation, while less than that potentially earned in other situations, is still quite good for the time worked and is apparently adequate to meet their needs. They liked the autonomy they had, say, as compared to being salaried physicians working in a MOH hospital. Despite all these rather positive features, were there other hospitals available in Batroun, we suspect a good share of the Batroun Hospital physicians would also use these other hospitals in order to augment their income. This more than likely would force Batroun to allow higher charges for medical acts and procedures in order to compete for physician services. This might force Batroun Hospital into a break-even or even a loss position.

2.2.7.2 The Area Health Authority Law

This law has recently been proposed and is in the process of being passed. Consistent with the GOL policy of assuring all citizens the right to good health, Lebanon is in the process of restructuring its health care system. The Area Health Authority (AHA) concept emphasizes comprehensive health care with a full range of preventive and curative services provided in public and private health facilities in a coordinated fashion.

The law proposes a two-tiered system. First would be a central level Directorate which would guide the system primarily by setting standards, setting general policy, planning, and supervision, and generally reinforcing professional and administrative systems.

The second level would be the area level consisting of some 10-12 "Area Health Authorities" (AHA's), each serving between 200,000 and 400,000 persons. The AHA's will be autonomous entities. Each AHA would have a Director, a policy committee and at least one general hospital as well as necessary outpatient facilities in which to provide all levels of health care.

Primary care is emphasized. Also envisioned is a financing arrangement which would permit individuals to select their provider: public, voluntary or proprietary. In essence there would be competition between the public and private sectors for personal health services. Categorical public health services such as food and water safety, sanitation, etc., however, also would be the responsibility of the AHA.

Each AHA would have the authority to structure its health care so as to meet its health needs most effectively. Innovative arrangements of physicians and health facilities into organizational structures capable of providing comprehensive care would be encouraged. Establishing an HMO, for example, has been suggested. The AHA would have the authority to set salaries or to establish alternative compensation packages for employees so as to attract and retain dedicated staff.

Three kinds of budgets are envisioned for the AHA: a capital budget to support facility and other development which would come from the central Ministry of Health; a recurrent or operating budget which also would come mainly from the MOH; finally, there would be an autonomous budget from funds collected by the AHA for services rendered to private patients and reimbursements from public sector and private sector agencies. The autonomous budget would be used at the discretion of the AHA. The specifics of the interrelationship of the three budgets would be more clearly defined as the AHA system is implemented.

To govern and manage the new system, directors and advisory boards or councils are proposed for both the central level and the area levels. These boards aim at getting community representation into decision making.

The Area Health System concept, we are told, has been approved in principle at the GOL ministerial level and is in the process of being drafted into legal language so that it can be considered for legislative approval and enactment in the near future.

2.2.7.3 Summary Comments

The AHA concept offers the opportunity for major broadening of the coverage and quality of health care in Lebanon. Both the autonomous hospital law and the proposed AHA legislation present some significant opportunities for strengthening the financial basis of the health care delivery system which are explored more fully in Sections 3.0 and 4.0 of this report.

3.0. Health Services Financing Mechanisms

3.1. Financial and Service Characteristics of the Major Health Care Providers and Financial Intermediaries

In the previous chapter the components of Lebanon's health care system were outlined in terms of types of public and private providers and the distribution of health facilities and human resources regionally. Because of lack of basic data, the performance of the system in meeting health service needs and in reducing health problems in various categories cannot be given. Similarly, in many cases, data with which to describe the financial performance of the health care system in Lebanon also either are not available or are of questionable accuracy. We are thus limited to making best estimates of expenditures of various health care providers, as well as of out-of-pocket expenses incurred by patients.

Table 3.2.1. below provides a summary of financial and services characteristics of the major health care providers and financial intermediaries. Table 3.1.2. presents similar information concerning private health insurance. The salient features of health services delivery and financing mechanisms are discussed below.

3.2 Public Sector Health Services Delivery and Financing Mechanisms

3.2.1 The Ministry of Health (MOH)

As shown in Table 3.2.1, the MOH primarily serves 700,000 medically indigent, provides medical care in its own hospitals and outpatient facilities and reimburses costs of services rendered in private hospitals. Roughly 77% of hospitalized patients (40,000 52,000) are treated in private facilities with which the Ministry has contracts. In 1982, the MOH had contracts for 1184 beds with private hospitals. Reimbursements were based on a MOH fee schedule (tariff) and were reimbursed at 85% of scheduled charges. The Ministry's 1982 budget amounted to LL 234 million and of this sum, LL 160 millions were allocated for reimbursement of health services provided in the private sector.

3.2.2 Army and Public Security Forces

The military, including active duty army and public security forces and retired personnel, their dependents and civilian support staff, are provided care in military facilities or on a reimbursement-of-charges basis in private facilities. A total of 250,000 individuals are covered. Total expenditures are estimated at LL 75 million in 1982. Funds are directly allocated from the MOD to operate military health services and to reimburse private providers.

3.2.3 The National Social Security Fund (NSSF)

The NSFF provides financial reimbursement for health care charges incurred by employees in the private sector, including autonomous organizations. In 1982, a total of 645,000 persons, comprised of 215,000 employees and 430,000 dependents, were covered. Funding comes from employers, employees and the MOF. By special law, the MOF is obligated to pay the NSSF an amount equal to 25% of NSSF payments for medical services rendered on behalf of beneficiaries.

Care is provided in private health care facilities and reimbursement is based on a percentage of a NSSF fee schedule or tariff. Estimated expenditures in 1982 were LL 144 million. Total spending would have been LL 163 million if the NSSF had adopted the uniform tariff recently developed by the Task Force on Health Care Financing, MOH.

Table 3.2.1: SUMMARY OF FINANCIAL AND SERVICE CHARACTERISTICS OF MAJOR HEALTH-RELATED ENTITIES

ENTITY	FINANCING	THOSE SERVED - ELIGIBLES	SCOPE OF SERVICES & CLIENT PAYMENT	SERVICES UTILIZATION
Ministry of Health	1. Receives budget from Ministry of Finance, 1982 estimated total 234 million LL. MOH collects no fees from patients.	1. Anyone not covered by other health service - basically the medically indigent, estimated at 700,000.	1. Provides services directly in its own facilities, without charge to patients.	1. 1982 40,000 private hospitalizations 12,000 MOH facility hospitalizations. 120,000 out patient visits. (source, DG, MOH, 2/12/83).
	2. Budget break down M.L.L a. "Chapter 1" reimbursement of pvt. providers 130+ b. "Chapter 2 - long-term care (Tbc, mental rehab.) in private facility. 20+ c. "Chapter 3" reimbursement for private lab., x-ray, dialysis, etc. 10+ 160+ d. Est. cost of MOH facilities for medical care 50 e. Est. cost for general admin. & P.H. 24 Total; 234	2. Where no other facility is available, anyone presenting for care is treated without question.	2. Contracts with private hospitals + MDs and pays 85% of fee schedule. Patient pays 15% if able, up to 500 LL maximum. No outpatient benefits except lab, x-ray, dialysis, on referral from MOH OPD,	
	3. Average annual cost for those served: LL a. For private reimbursement 229 b. Add amount MOH pays for its own facilities serving an estimated 700,000 persons 71 Est. expenditure/ beneficiary/year 300LL	3. If patient unable to pay the 15% of tariff, MOH pays for them.	3. Covers out of Lebanon referral for medical care, 100% of costs including transport and attendant, 4. Categorial P.H. Services. 5. Covers services provided only in a 3rd class bed.	

Table 3.2.1 (Continued)

Army, Security Forces	1. Entirely funded by GOL through Ministry of Defense. 2. No budget estimate but in 1982 55 million LL spent on reimbursement of private sector care. This equaled 80% of services provided, hence total expenses estimated at 75 million LL; and estimated 15 M.LL for drugs. Est. expenditure/beneficiary /year. =300LL	1. Active duty military, security forces amounting to 35-40 thousand plus retirees and dependents. 2. Civilian employees, numbering estimated 35,000. 3. Total number covered 250,000.	1. 2 military hospitals, damaged and only partially operational. 2. Contract out to private facilities. 3. Active duty and dependents covered 100% 4. Civilian employees covered 75% of costs of services.	1. No information
National Social Security Fund	1. Financed by an amount equal to 7% of payroll, up to 1st LL750 /month, 1.5% from employes 5.5% from employer. 2. GOL, Min. of Finance, gives NSSF an amount equal to 25% of expenditures for medical care annually. 3. Total estimated expenditure for 1982 is 144 M.LL. This equates to 223 LL per beneficiary. 4. Total out of pocket for 15% not reimbursed by the fund amounts to approx. 25 M.LL However, in fact it is believed beneficiaries pay more than this because reportedly some providers charge more than the authorized tariff.	1. Employees in private industry industry - from one employee, up. 2. Foreign workers whose countries cover Lebanese workers in their country. 3. Total covered in 1982, 645,000 (215,000 employees insureds plus 430,000 dependents).	1. Covers all services provided under fixed schedule (tariff) of fees; NSSF paying 85% of these fees and the client 15%, for in-patient care and 70% and 30% respectively, for out patient care. 2. Provider bills the NSSF directly collects the consumer portion from the consumer. 3. Fund does not operate any medical care facilities at this time but has a linkage to the Batroun hospital which operates as an autonomous entity. 4. Covers only 3rd class changes in hospital, but client can pay difference for higher class bed. 5. Patients may be referred out of Lebanon for care not available in the country.	1. All those covered have similar benefits. 2. Because of delays in processing claims, some providers are reluctant to cover services involving small amounts of money e.g., under 100LL.

Table 3.2.1 (Continued)

Office of Social Develop-	1. Health services financed from Min. Labor & Social Affairs directly in some medical-social centers, and in others, cost sharing with voluntary organizations. Total funding is budgeted at 10 M.LL for 1983, as follows: 7 M.LL to cover health services for 113,250 in medical-social centers entirely subsidized by ODS and 3 M.LL for 113 smaller medical-social centers jointly funded with voluntary agencies serving 81,700. Total number served equal 194,950; average expenditure equal 10 M.LL/194,950 or 51.3 LL per beneficiary..	1. OSD attempts to fill the gaps for social services and MCH care. Operates in in rural areas and under served beneficiaries.	1. Provides mainly curative MCH services - mid-wives, care of children some immunizations and health education through medical-social centers.	1. Degree to which OSD services are utilized by under served population has not been established,
	2. Total collected from beneficiaries unknown.	2. Total served in 82 was 194,950.	2. Client pays 5 LL per center visit. Total collected is unknown but maximum would not exceed 194,950 x 5 LL or around 1 Million LL.	
	3. Total spending in 1982 was 8 M.LL.		3. OSD is developing expanded centers including delivery of maternity cases and broader health care.	
Mutuelle - Cooperative of Civil Servants, (UGCS).	1. Financed by contribution from civil servants and the Lebanese government. Funds go to the Cooperative of Civil Servants to cover various benefits. 1982, of a total budget of 75 M.LL, 50 M.LL went for health benefits. This equates to 50 M.LL/220,000 = 221 LL per beneficiary.	1. Employees and their dependents are covered equally. Civil Servants number 47,000 and dependents 173,000, for a total of 220,000 eligibles.	1. Provides health and death benefits and rewards for births and marriages.	1. Break down of served utilization by beneficiaries not available from visit to Mutuelle. (UGCS)

Table 3.2.1 (Continued)

Mutuelle Cooperative of Civil Servants, (UGCS) (Cont'd.)			2. Health benefits vary with employees rank. Benefits are cash payments for health care based on a relative value scale which the Mutuelle has established. This scale has varied from that used by the MOH and NSSF for reimbursement in the past. Drug costs are partially reimbursed. Lowest rank employee treated in 3rd class; higher rank gets 1.6 x 3rd class reimbursement amount and can use 2nd class bed; highest rank reimbursement is 2.3 x 3rd class bed care. 3. Employee pays 1% of full payroll amount and government 6% of payroll. 4. Beneficiary may be referred out of Lebanon for medical care not available in country.	
Municipalities	1. Municipality health services are under the jurisdiction of the Ministry of the Interior. 2. Many municipalities operate dispensaries which provide services to municipal employees and their dependents and to the general public.	1. Municipal employees and dependents. 2. Exact population coverage is unknown.	1. Outpatient services usually are rendered free to municipal employees and their dependents. 2. A charge (nominal) is often required for services rendered on behalf of the general public. Exact fees and fee revenues are unknown.	1. The City of Beirut spent roughly LL 10.0 million in 1982. 2. Spending on the part of all other municipal health facilities is estimated at LL 10.0 million in 1982.

3.2.4 Office of Social Development (OSD)

The OSD provides outpatient care to some 195,950 medically underserved individuals. The OSD spent LL 8 million for care in 1982. In 1983, it expects to spend LL 7 million for care in its own facilities and and additional LL 3 million for care provided jointly with voluntary organizations.

3.2.5 Cooperative Government of Civil Servants (UGCS)

The UGCS also provides financial reimbursement for care in private health facilities based on a percentage of total charges as established by its own individual fee schedule. Those covered include 47,000 GOL employees plus 173,000 dependents for a total of 220,000 persons. Funding comes from payroll tax assessments paid by employees and the national government. The tax assessment is 7% of total wages and salaries, excluding allowances, of which employees pay 1% and the State pays 6%. The 1982 estimate for health reimbursement expenditures is LL 50 million.

3.2.6 Municipalities

Municipalities frequently provide outpatient care in dispensaries and health centers which they operate. In Beirut, the municipality estimates that it spent roughly LL 10 million for health services in 1982. A rough estimate of expenditures by all municipalities in Lebanon for health care in 1982 is LL 20 million.

3.3 Private Sector Health Insurance

In the private insurance sector, one finds both commercial health insurance, e.g., the American Life Insurance Company (ALICO) and health insurance offered their employees by employers who are self-insured, e.g., AUB. Table 3.3.1 below details the coverage, benefits and costs of health insurance provided by ALICO and AUB. No attempt was made to survey all private sector health insurance plans individually. The information presented concerning ALICO and AUB are illustrative of the types of private insurance plans that are in effect in Lebanon at the present time.

Private health insurance is not used extensively in Lebanon. In general, private health insurance is supplemental to public sector direct health services delivery and reimburses the costs of services rendered by private providers. ALICO estimates that LL 5 million is spent annually in Lebanon for commercial health insurance covering 100,000 persons primarily to supplement NSSF benefits. AUB spends LL 5 million each year providing coverage for some 13,000 students, faculty and other employees, including dependents.

Although their number is small, some firms provide medical care for employees in company dispensaries, without charge. Middle East Airlines (MEA), Lebanon's largest employer with 5,000 employees, provides both this service and also pays the 15% of medical care charges not reimbursed by the NSSF. MEA estimates that it spent LL 1 million in 1982 for these benefits.

It is difficult to cost out the total spent on health care by private firms and other organizations in 1982. Including commercial health insurance, AUB and MEA, LL 11 million are accounted for. Doubling this figure to LL 22 million, we believe, gives a reasonable estimate of the total expenditures by private health insurance organizations in 1982.

Table 3.3.1
PRIVATE HEALTH INSURANCE IN LEBANON

ENTITY	REMARKS	THOSE COVERED	SCHEDULE OF BENEFITS	COSTS
AMERICAN UNIVERSITY OF BEIRUT HEALTH INSURANCE	1. Plan is self insured by AUB and provides both hospitalization and ambulatory care. Plan is called the HIP	1. Students and AUB employees - faculty and staff are covered, including dependents, according to the payment of premiums based upon the class of service and number of dependents.	1. Subscribers are entitled to inpatient and outpatient care at the AUH, with certain exclusions - eye glasses, blood, infusions, some drugs and ambulance service. Pre-existing health problems may be excluded. Hospital benefits, i.e., number of days per year, increase with length of employment.	1. Premiums are generally collected monthly from employees or in advance from students.
	2. Number currently covered is 13003. This includes students, faculty members and employees. Close to 100% of eligible sign up for the HIP.	2. Distribution of subscribers by class of bed: HIP / HIP + NSSF / TOTAL 1st class: 1,016 / 559 / 1,575 2nd class: 5,672* / 1,558 / 7,230 3rd class: 147 / 418 / 565 Total: 6,835 / 2,535 / 9,370 * includes 4247 students.	2. Faculty and key staff are generally treated in 1st class accomodations, students in second class and lower level workers in third class.	2. On an annual basis, the following is the schedule premiums as of March, 1982: 1st Class — HIP / HIP/NSSF Subscriber: 960 / 708 Couple: 1,644 / 1,248 Cpl + 1 child: 2,112 / 1,608 Cpl + 2 or more children: 2,568 / 1,944 2nd Class Subscriber: 708 / 372 Couple: 1,248 / 648 Cpl + 1 child: 1,608 / 840 Cpl + 2 or more children: 1,944 / 1,008 Third Class Subscriber: 480 / 216 Couple: 876 / 384 Cpl + 1 child: 1,092 / 420 Cpl + 2 or more children: 1,356 / 588 Total premiums paid in 1982 were 4 million LL. This equates to 308 LL per insured/year. In 1982 total costs were 5 million LL. This deficit was funded by the University.
	3. The AUB Hospital Insurance Plan has two general plans - one for subscribers not covered by NSSF and another which serves to supplement benefits under NSSF. Benefits under both plans cover identical services. The difference is the premium charged and the class of service.	3. The total of subscribers plus dependents is 13,003.		

Table 3.3.1 (Continued)
PRIVATE HEALTH INSURANCE IN LEBANON

ENTITY	REMARKS	THOSE COVERED	SCHEDULE OF BENEFITS	COSTS
COMMERCIAL INSURANCE-AMERICAN LIFE INSURANCE COMPANY (ALIC)	1. Generally sold to groups in commercial organizations. Minimum group is 10 employees. 2. Health insurance is generally sold only as an add on to life insurance. 3. ALIC estimates it has 20,000 employees covered by health insurance and that this constitutes half of the commercial health insurance in Lebanon. Total number of coverage is estimated at 40,000 employees plus 60,000 dependents or 100,000 individuals. 4. Percentage of firms with fifty employees or more which make commercial health insurance available to their employees is small - at most ten percent. 5. As seen from the schedule of benefits, catastrophic illness coverage is minimal. 6. Employers may pay for some or all of employees insurance costs as a fringe benefit.	1. Employees and eligible dependents of firms with contracts with ALIC. 2. Covers employee and only immediate family-spouse and dependent children. 3. Employees and dependents have identical coverage.	1. ALIC sells two plans: These have identical benefit categories but differ in the maximum paid per category. 2. Both plans are expected to be used in conjuction with NSSF. 3. Both plans offer Medical Assistance Insurance (MAI) and Supplemental Major Medical Insurance (SMMI) MAI has no deductibles and no co-payment or co-insured provisions. It pays immediately for hospital services (only) up to the Plan's limits. These are 3,700 LL for Plan B and 6,200 LL for Plan A. SMMI may be purchased alone or in conjuction with MAI. If brought alone there is an deductible of 4500 LL. MAI covers this deductible; however there is a 20% co-payment or co-insurance charge to the insured. Both plans have maximum life time benefits of 50,000 LL and vary in the daily hospital room reimbursement - 160 LL for Plan B and 250 LL for Plan A. For an additional "load" of 20% on the premiums, out patient visits are also covered and their cost subtracted against the life time maximum.	1. Total annual premiums for commercial health insurance in Lebanon are estimated by ALIC as around 5 million LL. This equates to 50LL/per insured/year. 2. Premiums are collected monthly; annualized they are as follows: Plan B - Low Coverage Employee Only LL / Employee & family LL MAI 288 / 1,008 SMMI 72 / 192 SMMI & Out-Pt. 86 / 230 Plan A - High Coverage MAI 432 / 1,560 SMMI 144 / 240 SMMI & Out-Pt. 173 / 288 (Note that any number of family members are included in one flat premium rate)

3.4 Out-of-Pocket Expenditures

The last and a major source of health care financing in Lebanon is direct out-of-pocket expenditures for drugs, physicians and other health related costs by the consumer. No good data on which to base estimates of the magnitude of these expenditures are available.

Drug costs constitute a major component of the costs of health care, particularly out-of-pocket expenditures. An International Labor Organization (ILO) study on health care costs estimated that expenditures on drugs represent 42% of total expenditures on medical care in Lebanon. Most recent figures on the reimbursement for charges for drugs paid by the NSSF amount to 55% of total outpatient charge reimbursement (LL 253 / LL 462) and 12% of reimbursement of inpatient charges (LL 34 / LL 283). These figures are based on average annual costs per insured. The composite or weighted average for reimbursement of drug charges is 38.7%. This figure corresponds closely with the 42% reported in the ILO study.

The ILO study estimated that Lebanon spent 6% of individual income on drugs and from 11% to 17% of income on health care all together. However, the portion of these expenditures that is directly out-of-pocket and that which is reimbursed by some type of insurance coverage has never been calculated. One could use the percentage of drug costs relative to "income" as a basis for estimating total expenditures on health services. However, the partial translation of the ILO study available to the authors does not make it clear how "income" is defined (i.e., disposable, personal, etc.) and the original report was not available for purposes of this study. Therefore, some basis other than percentages of income had to be used in order to estimate total outlays on health, including expenditures made out-of-pocket.

Based on discussions with people knowledgeable about Lebanon's health sector, we judge that at least as much is spent out-of-pocket at point of service as is paid for by some type of public sector reimbursement mechanism and private insurance organizations, including firms that self-insure, plus the value of services directly provided by Government.

3.5 Total of Health Expenditures in Lebanon in 1982

Aggregating the expenditures for health from the various sources described in Sections 3.3 and 3.4 above yields a total of LL 551 million per year. This is shown as follows:

	LL Million
Ministry of Health	234
NSSF	144
UGCS	50
Military	75
OSD	8
Municipalities	20
Private Health Insurance	20
	551

Of these LL 551 million, the bulk of funds, possibly 98%, are spent on curative medical services, and 80% represents reimbursements to the private sector. To the LL 551 million must now be added at least an equal amount for out-of-pocket expenditures. This yields a total of LL 1.1 billion, as the lower bound of

expenditures for health care in Lebanon estimated for 1982, or a per capita expenditure of LL 400, based on a population of 2.75 million.

This estimate was judged to be low by Lebanese health authorities whose best "guess" is about LL 1.6 billion. However, this last estimate is high by comparison with other estimates of aggregate outlays on health services in Lebanon. One such estimate is based on village studies which show an average annual outlay per capita of LL 458, which when multiplied by 2.75 million persons estimated to be living in Lebanon in 1982 yields an aggregate estimate of total expenditures on medical services at LL 1.26 billion. A second estimate is based on family budget expenditure data collected by the Ford Foundation in 1966, showing that on the average annual expenditures on health services per capita in that year equaled LL 164.5. Assuming a 6% rate of compound growth in health outlays annually, per capita expenditures on health services would have grown to LL 443 over the interval of years 1966 to 1983. Multiplying LL 443 times an estimated population of 2.75 million persons living in country in 1982 yields LL 1.22 billion as an estimate of aggregate outlays on health services in Lebanon in that year.

Thus we conclude that aggregate expenditures on health care in Lebanon in 1982 lie somewhere between LL 1.1 billion and LL 1.6 billion. With greatest liklihood, the true estimate lies nearer to the lower than the upper bound of this range. Total expenditures appear to be divided, roughly, equally between public and private sectors as sources of funds, and drug costs as a component of total health expenditures appear to range from 38% to 42% of total outlays on medical services.

3.6 Weaknesses in Financial Mechanisms

Weaknesses in the existing financial mechanisms are discussed under individual categories below.

3.6.1 Fragmentation Among Public Sector Agencies

Public sector direct provision of health services and reimbursement of the costs of privately provided health services is scattered among several different agencies which are in no way coordinated. The NSSF, UGCS, and the OSD are autonomous agencies under the tutelage of the MOLSA. Municipalities and the Military are under the control of the MOI and the MOD, respectively. Both the MOH and the Military reimburse the costs of private sector provided health services, in addition to providing some services directly. The OSD supplies services directly (outpatient services only), while the UGCS and the NSSF are strict cost reimbursement agencies. The result is that different agencies, in principle, cover different but sometimes overlapping segments of the population providing non-uniform benefits to beneficiaries who happen to be covered by respective agencies depending almost wholly on their circumstances of employment.

Public agencies receive resources in a wide variety of ways: direct allocations from the MOF in the case of the MOH, ODS (MOLSA), and the MOD and wage and salary payroll tax assessments in the cases of the UGCS and the NSSF. Yet the NSSF also receives part of its revenues (25% of annual expenditures) directly from the MOF. There is no clear equity achieved in the case of benefits to beneficiaries who are covered, since each agency provides direct services or reimburses the costs of privately provided health services according to its own tastes, individual capacity, and schedules, as the case may be.

Adding up the total population covered by the various public agencies, it appears that a maximum of 2 million persons are covered by public sector direct delivery of health services or cost reimbursements, leaving 1 million persons medically disenfranchised.

Employee tax assessments range from zero in the case of the Military, 1.5% of monthly wages up to a maximum of LL 750 annually in the case of the NSSF, to a high of 1% of total wages in the case of members of the UGCS.

There would appear to be great advantages in adopting a uniform tariff or fee schedule on the part of public agencies, consolidating all or most of the public sector reimbursement activities into a single agency, and in providing for greater uniformity in employee contributions to public sector cost reimbursement. There also would appear to be merit in the MOH's recent decision to absorb the direct health services delivery activities of the OSD into MOH operations.

3.6.2 Absence of Cost Controls and Quality Assurance

As noted in Section 1.0 of this report, cost reimbursement invites various abuses. Cost reimbursement invites the oversupply of services, false billing and charging over and above legal fee and service tariffs. In the present system, very little is done to enforce the legal tariffs adopted by each agency for fear that private providers would refuse to accept the agency's clients and would provide services to the clients of another agency or engage in strictly private practice.

Actually, before 1976, the GOL cost containment program was active and was believed to be reasonably effective. However, during the course of eight years of war, the public health sector was hit hard and the private sector grew at a very rapid rate. Public agencies became increasingly weak due to war and political turmoil. This led to a decline in discipline and in effective administration of many Government programs, including those in the public health sector. Now that the war hopefully is over, Government has the opportunity to regain momentum in administration and enforcement. However, the question is how best to do this.

Adoption of a uniform tariff on the part of all public sector reimbursement agencies (such as the one recently developed by the Task Force on Health Care Financing, MOH) and consolidation of public sector cost reimbursement activities into a single responsible agency would facilitate enforcement of legal fees greatly. However, in addition to these things, Government must also develop the necessary data base and performance standards requisite to an effective program of cost containment that would improve the efficiency with which public funds are spent. An aggressive program of cost containment would not only serve Government's interests in using public funds more efficiently, but would also facilitate Government's interests in supplying greater volumes of health services through the public sector.

In addition to a current lack of effectively operating government medical facilities, Government faces the problem of recruiting and retaining an effective and dedicated cadre of physicians and other health professionals to Government service. In order to do this, Government would have to provide a compensation that at the margin is equal or better than the levels of earnings available in the private health sector. In the absence of an effective program of cost

containment, there is no check on the rise in the levels of earnings in the private medical sector. Thus, Government will always be fighting a difficult, if not losing, battle in competing with the private medical sector for the services of health professionals, unless Government resorts to conscription or forced placement in government service upon graduation.

An effective cost containment program cannot be launched without an equally strong program of quality assurance. If Government simply puts a lid or cap on costs and prices as the basis for its reimbursement activities, levels of private sector earnings can still raise, if the private health sector reduces quality of service to the obvious disadvantage to the welfare of patients. The quality of medical care in Lebanon is very uneven, in the authors' judgment, and in some cases is below minimum standards of acceptable medical practice.

Currently there are very few mechanisms in place to monitor the quality of care rendered in either the public or the private sectors. Of the roughly 130 or so hospitals in Lebanon, only four tissue committees exist and one of these was established only two years ago. There is no evidence of peer review or objectively established and enforced utilization and medical practice and performance standards outside of university hospitals and a handful of private voluntary hospitals. Medical audits are not regularly conducted outside of those institutions which accommodate teaching programs. Inspection and certification standards are very low and are not enforced consistently.

Under the circumstances cited in the paragraph immediately above, days of hospital care and visits to outpatient facilities and clinics could not possibly be reasonably comparable in terms of quality of care received, and thus reimbursement even according to a standard fee schedule could not be either wholly rational or equitable. The problems of lack of uniformity in the quality of care available and the general low level of quality of care in many cases will become greater as the trend toward foreign-trained physicians accelerates in the future, as predicted.

3.6.3 Lack of Private Health Sector Innovations and Initiatives

A major weakness of the existing system is the narrow range of choices existing for providers, consumers and reimbursement agencies. Lebanon, like many other Middle Eastern countries, is firmly committed to private enterprise. However, one of the virtues of private enterprise is its ability to innovate and to take the initiative in launching new forms of organization and methods of production and distribution. In other countries, like the United States, Canada, and West Germany, the private health sector has distinguished itself by initiating new trends in the organization of medical services delivery, like group practice and Health Maintenance Organizations (HMO's). These initiatives are noticeably lacking in Lebanon.

New initiatives in the organization and delivery of medical practice must be acceptable to providers, consumers, and reimbursement agencies. It is not always entirely clear how these three parties come to agreement as to the desirability of adopting new approaches to the delivery of health services. However, it is clear that any one of these groups can take the initiative.

Given the conspicuous absence of these innovative ways of organizaing and delivering medical services in Lebanon and the cost savings that HMO's, in particular, have demonstrated in other countries, it would appear wise if

Government were to experiment with ways of fostering developments in these directions. HMO's in particular lend themselves to building-in ways of controlling service utilization, peer review, and consequent monitoring of quality and control of costs which would be in the best interests of Government and consumers, and which may be appealing to some providers.

Private health insurance is in a embryonic stage in Lebanon. Yet in other countries in recent periods, private health insurance companies have fostered the launching of new forms of health care organization and delivery, including HMO's.

The principal advantage of fostering new private sector initiatives is to create an enhanced environment of healthy competition between and among private sector providers, leading to improvements in the overall quality of care provided and lower costs per unit of service. An added advantage involves the wider choices presented to both consumers and to providers in terms of how these groups choose to participate in the medical market place in their respective capacities. It would also present Government with a wider choice of reimbursement options with respect to the private health sector.

3.7 Relationship Between Public and Private Health Sectors

As stated in Section 3.5 above, 80% of public sector revenues are spent on reimbursing the costs of private health sector provided medical services. The MOH resents its reimbursement role and feels in an inferior position relative to the private health sector. The MOH currently has little capacity to deliver services directly due to lack of resources, facilities and personnel, and its administrative capacity is weak. The private health sector is rich and powerful in terms of facilities and personnel, and has a favorable public image. The Government health sector is stigmatized as capable of producing only low quality medical services, if services can be provided at all. Thus the private sector is in a position virtually to dictate costs, prices and qualities of services and other terms on which it will provide health services on behalf of Government.

Naturally, the private sector provides services on terms that are most conducive to furthering its own individual and often selfish interests, which cannot be presumed to square with the collective interests of the Lebanese people. Equally naturally, the Government health establishment is frustrated and would like to regain a position of strength that it enjoyed vis a vis the private sector before the war(s).

Government also feels political pressure. Government feels that it must make a visable, if not dramatic, effort to directly provide a larger volume of health services to the people than currently provided in order to develop credibility in the eyes of the people and thus survive politically.

The MOH places major emphasis on expanding the number of public hospital beds vis a vis the private hospital sector. Public hospitals are highly visable and are viewed by the MOH as "temples or palaces" of compassion for the people, thus serving to demonstrate Government's commitment to improving the general welfare.

However, the MOH also aggressively justifies the expansion of the number of public hospital beds on economic grounds. The MOH insists that it can provide a quality of hospital services that is equal to that provided by the private health sector, and that the MOH can do so at lower costs than those currently reimbursed

per day of hospital service to private hospitals on behalf of MOH patients It is consistently stated by MOH officials that increasing the number of public hospital beds is necessary in order to provide effective competition between the public and private sectors, resulting in higher quality and lower costs per unit of hospital services provided by the private hospital sector. MOH officials assert that effective competition between the public and private hospital sector requires that 40% to 60% of the total number of short-term general acute-care hospitals be public.

The total number of existing public, short-term acute-care hospital beds, if they were fully operational, is around 1200, while the total of existing private beds of this sort number roughly 5,200, yielding a total of 6,400 beds (see Section 2.0 of this report). In order for the MOH to roughly meet the lower bound of the "required" percentage of public hospital beds to total hospital beds, say 45%, which in its view is necessary to provide effective competition, the MOH would need 3000 additional public hospital beds (1200 + 3000 / 9,400).

The problems of constructing, staffing, managing, and financing the operation of an additional 3000 public hospital beds in Lebanon are enormous, if not staggering. Construction and management problems aside, staffing and finding sources of funds with which to finance operations are most critical in view of Government's limited fiscal capacities (see Section 2.1 of this report) and the current low level wages and salaries existing throughout the Lebanese civil service. However, the MOH has several ideas as how to surmount staffing and operating cost financing problems.

Staffing of hospitals would be accomplished by implementing the 1978 Autonomous Hospital Act which, among other things, would allow public hospitals to compensate professional and non-professional staff in ways not allowed by the civil service regulations. The basic idea is to pay physicians a base salary and to allow them to earn additional income on a piece-rate basis from professional acts and procedures performed on public patients. Hospitals would negotiate contracts with private physicians, provide services and collect revenues consisting of reimbursements from public sector reimbursement agencies, private health insurance plans, if applicable, and out-of-pocket from patients; and split the revenues with physicians according to a formula included in the contract, specifying base salary plus allowable commissions from medical practice. Public hospitals would also be able to accept purely private, as well as public, patients. Public patients admitted to public hospitals would be required to pay a maximum co-payment of LL 500 as is the case currently.

The idea of letting public hospitals accept payment from public sector reimbursement agencies is appealing, since it would provide a financial basis for the public hospital sector that would be more firm than is the case currently. The permitting of public hospitals to admit purely private paying patients would also contribute to strengthening the financial basis of public hospitals, but is less appealing because physicians may neglect public patients in order to pay more attention to private patients admitted to public hospitals. Strict discipline would be required in order not to let the quality of care rendered to public patients decline in public hospitals.

Plans to operate public hospitals under the autonomous hospital law, permitting higher rates of compensation to health professionals than currently permitted by civil service regulations, appears to be a necessary fact of life in

Lebanon. However, this has a certain aspect of "if you cannot fight them, join them" about it. Also, it has the disadvantage that fee for service compensation generally encourages oversupply of medical acts and procedures.

In Section 4.1 of this report, the authors provide an outline of a total compensation plan that might be appropriate for physicians under existing circumstances as requested by H. E. Dr. Mroueh. However, a few words of caution are in order.

First, in general, as stated in Section 1.0 of this report, public sector professional compensation must be competitive with the level of private sector earning in order to attract health professionals into public service. Public hospitals which are unique to an area would have the advantage of being the only workshop in town, i.e., Batroun Hospital (see section 2.2.7.1.1 above). However, in Beirut, Tripoli, and other major centers of population concentration where private hospitals exist, physicians have alternative places of work and thus the MOH will have to meet the competition provided by prevailing levels of private sector earnings. As pointed out above in Section 3.6.2, the public sector's ability to effectively compete with the private health sector for the services of physicians would be enhanced by an aggressive cost containment program. Regardless of the level of private sector earnings, however, the MOH must offer a level of compensation that is competitive with private sector earnings unless the GOL resorts to conscription of health professionals or forced-placement upon graduation and licensure. The implication of this is that equalization of health professional compensation levels between the private and the public health sectors, other things equal, implies equalization of operating costs per unit of service rendered in the two sectors. Thus the cost advantage that MOH officials claim for public hospitals over private hospitals would ultimately disappear.

Second, equalization of quality of medical care and operating costs in both the public and private sector, while at the same time retaining an upper limit of LL 500 out of pocket copayments required only in the case of patients admitted to public hospitals, would lead to a strong patient preference toward public and away from private hospitals. Public hospitals would come under increasing demand pressure, thus creating a justification for the construction of ever greater numbers of public hospital beds. Theoretically, ultimately the hospital sector could become comprised virtually entirely of public hospitals; the result being a nationalized hospital system.

We do not believe that Lebanese health officials want this. While it may be necessary to give public hospitals an advantage over private hospitals for such a time as it takes for the public sector to overcome its image of stigma, when, if ever, public hospitals become competitive with private hospitals, the upper copayment limit of LL 500 should be removed in the case of patients admitted to public hospitals. Medical indigency can be determined on a case-by-case basis and free medical service to whatever level is required can be provided by either public or private hospitals.

Ultimately, the issue concerning the desirability or undesirability of expanding the number of public hospital beds rests on considerations of strict medical necessity and need, and the economic justification for doing so. While in the short-run political considerations may dominate public health policy decisions, in the long-run politics must yield to strict medical need and economic imperatives. Since this report deals with health sector financing

issues and problems, the issue concerning the economic justification for the construction of 3000, or even any, new public sector hospital beds must be explored. This issue is explored in Section 3.8 below. The crux of the issue is whether or not the GOL can afford to construct and operate a larger number of public sector hospitals.

3.8 Economic Desirability of Expanding the Public Hospital Sector

In any analysis, one must be aware of the existing alternatives. Many alternatives to a massive expansion of the number of public sector hospitals exist. Some of these include an aggressive program involving construction of health centers with limited numbers of beds; aggressive regulation of the private health sector to make it behave responsibly in terms of quality of care provided and costs; the fostering of private sector initiatives aimed at quality improvement and cost reduction; and leaving it to private sector to fill gaps in the system, while at the same time regulating it to behave responsibly in terms of quality of services provided and prices charged to consumers. In making public policy decisions, cost effectiveness (obtaining the desired outcome at least expenditures of public funds) must be a major ingredient in the decision making process. Time and space do not permit costing out all the opitions available. However, it is possible to analyze some of the critical assumptions and implications of the MOH contemplated policy of greatly expanding the public hospital sector.

The crux of the MOH's economic justification for expanding the number of public hospital beds is its belief that a patient day of hospital care can be provided at a cost of LL 200 in a public hospital, while the MOH on the average is currently reimbursing the private hospital sector LL 300 per day of hospital care. In short, the MOH believes that if it had beds, it could save LL 100 per patient day of care. Yet, if professional services costs were eventually to be equalized, how could there be a difference between per day costs in public and private hospitals? The answer is that some elements of the private sector are making excessive profits or that some element of cost has been left out of the public hospital per patient day cost. We believe that both cases are likely to be true. However, to the extent that the difference lies mainly on the side of private sector abuse, the solution is regulation and better enforcement, not construction of additional public hospital beds. Thus attention is focused on missing elements of cost.

From discussions with MOH officials it is clear that there is little attention paid to costs of general medical administration, maintenance, and hospital costs. This is understandable. General medical administration is something that MOH officials are doing daily and is taken more or less for granted. Due to war, very little public funds have been available for regular maintenance, and capital costs are not seen to be the responsibility of an operating ministry, being separately budgeted and provided for by the CDR and the MOF.

It is inconceivable that the LL 200 per patient day figure as the cost of a day in a public hospital could include an appropriate allowance for general medical administration, maintenance, and replacement costs of capital. When questioned about the make-up of the LL 200 per patient day figure, MOH officials admitted that capital replacement costs were not taken into account, but insisted that the figure did allow for general administration and maintenance. Thus,

analysis focuses on taking into account the cost implications of making an appropriate allowance for capital replacement.

Hospital cost analysts often state that the average recurrent costs as a percentage of initial capital costs range from 30% to 75%, i.e., the R/D ratio discussed in Section 1.5 of this report. Variation in the R/D ratio is usually said to be due to differences in levels of medical technology, levels of services, and levels of compensation of staff. AUH is a comparatively high technology hospital comprised of roughly 400 beds and current operating expenditures range from $26 million to $30 million annually, depending on the number of beds that are in use during the course of the year. (Note that operating cost figures include a depreciation allowance for replacement of capital stock.) The AUB university controller, a highly qualified hospital financial consultant trained in the United States, estimates the historical cost of AUH beds at $40 million, and thus the R/D ratio in the case of AUB ranges from 65% to 75%. This same individual estimates that replacement costs with no upgrading of equipment or service would cost twice the original cost, or $80 million. Calculated on a current replacement cost basis, the R/D ratio in the case of AUH ranges from 32.5% to 37.5%.

Note that the R/D ratio varies directly with the level of occupancy, even when cost per patient day is constant. The higher the occupancy, the greater the number of patient days, and the higher are total operating costs relative to the capital costs of the facility. The maximum R/D ratio for any given hospital, costs per unit of service remaining constant, is reached at 100% occupancy.

Making allowance for capital replacement, the central questions on which analysis must shed light are the following:

- At what level of occupancy would public hospitals have to operate in order to be able to compete with average private hospital sector per patient day costs of LL 300?
- What would be the implications for public sector reimbursement, if the government were to build and operate 3000 new beds?
- What would it cost Government to construct 3000 new public sector beds and what would it cost to operate them annually in the years to come?

3.8.1 Assumptions

Estimates of the costs per bed of permanent (as contrasted with prefabricated) hospitals in Lebanon range from LL 360,000 ($90,000) to LL 800,000 ($200,000) depending on level of technology. We selected a cost of LL 440,000 ($110,000) as a reasonable estimate of the current bed cost of a medium technology public sector hospital in Lebanon. We also assume that each bed is available 365 days of the year. Thus, 3000 new beds potentially could provide a total of 1,095,000 bed days of service annually.

Due to fixed staffing ratios, constant rates of remuneration, constant area requirements, and customary constant charges per unit of ancillary services, economies of scale in the rendering of medical services often are largely absent in a given facility. Thus we assume that recurrent medical costs of service are LL 200 per patient day and remain constant regardless of level of occupancy. While evidence exists that average length of stay (ALOS) is typically greater in public hospitals than in private hospitals, we assume that ALOS is 6.0 days, roughly the same as in the private hospital sector in Lebanon presently.

We assume that capital replacement costs increase at a rate of 10% compounded annually. However, we assume that public hospitals collect revenues and invest them at 15% compounded annually, so as to be able to replace capital stock over a 20 year period. (This is a very conservative assumption that is highly in favor of the MOH's case that it somehow can provide services more cheaply than the private sector) It is suggested that if this were done, hospitals would be replaced every 20 years. It also may be noted that if this were done, savings would be mobilized in the form of public hospital sinking fund reserves that could be lent out to the private (non-hospital) sector for reconstruction and development purposes.

In the interests of simplicity, initially we assume zero inflation with respect to all elements of costs other than capital replacement costs. Later we relax this assumption to present a more realistic picture of the recurrent cost implications of operating a public hospital sector comprising 3000 beds.

3.8.2 Results of Analysis

Assuming that hospital bed capital replacement costs increase at 10% compounded annually, the replacement cost of a bed increases from LL 440,000 ($110,000) to LL 3.0 million ($740,000) in 20 years. However, since replacement funds are assumed to be invested at 15% compounded annually, it is necessary to set aside and invest only LL 28,893 ($7,224) annually per bed in order to provide for replacement at the end of 20 years. This LL 28,893 represents an amortized annual capital replacement cost that must be covered by annual revenues. When divided by annual patient days, which depend on the level of occupancy, the resulting figure represents an amortized capital cost per patient day. Total operating costs per patient day in this analysis represent the sum of recurrent medical costs and amortized capital costs per patient day. Recurrent medical costs, amortized capital costs and total operating costs per patient day are presented in Table 3.8.2.1 below, by selected levels of occupancy rates.

Table 3.8.2.1

Recurrent Medical, Amortized Capital, and
Total Recurrent Costs per Patient Day According to Occupancy

Occupancy (%)	Rec. Med. Cost/Day (LL)	Amort.Capital Cost/Day (LL)	Total/Rec. Cost/Day (LL)
20	200	395	595
40	200	194	394
60	200	134	334
80	200	100	300
100	200	57	257

Source: Calculations of the Authors.

The answer to the first question posed at the end of Section 3.8 above is provided by Table 3.8.2.1 above. In order for the MOH to replace its capital stock at the end of 20 years and to produce patient care at an average cost of LL 300 per patient day, public hospitals on the average would have to be 80% occupied. The MOH could produce patient services at a cost below what it is currently reimbursing private hospitals, LL 300, only if it were able to achieve an occupancy rate above 80%.

In the years prior to the war, MOH hospitals averaged only about 40% occupancy (See Section 2.3). Thus, given the stigma currently attached to public hospitals, it would be very difficult for the MOH to boost public hospital occupancy rates to level of 80% or beyond in the near future. Evidence that is available suggests that even private hospitals, on the average, are achieving only 60% occupancy.

If private sector hospitals were identical to the public sector hospitals, whose costs are hypothetically described by Table 3.8.2.1 above and are operating at only 60% occupancy and yet are receiving on the average only LL 300, per patient day, clearly private sector hospitals would be losing money at the rate of LL 34, per patient day. It is possible that most private sector hospitals earn sufficiently higher rates on private patients to cover losses on public patients. It is also likely that many private hospitals are charging excessively. Since many private hospitals are voluntary, capital replacement will more than likely be accomplished through charitable contributions at some point in the future. In the case of other private hospitals, it is probably that little or no concern is placed on capital replacement at all, hence total operating costs are underestimated.

In order to determine the implications of the construction and operation of 3000 additional public hospital beds for private sector reimbursement, we have to determine the impact of public hospital bed expansion on private sector admissions, patient days, occupancy rates and costs per patient days. In order to do this, two additional assumptions are made. First we assume that the total demand for hospital services remains constant. This implies that while occupancy in the private sector initially is 60%, private hospital occupancy will decrease as more public beds are added. Second, we assume that operating costs are the same in both the private and public health sectors. This last assumption allows us to draw on the information presented in Table 3.8.2.1 above. It also is very conservative from the MOH point of view, since it is the MOH contention that private hospital sector costs are higher than public hospital sector costs.

Given that there were roughly 5200 private hospital beds in 1982, which multiplied by 365 yields 1,898,000 potential private hospital bed days of service. However, assuming private sector occupancy at 60%, the total number of private sector hospital days of service rendered equaled 1,138,800 (1,898,000 x .6).

If the public sector were expanded by 3000 beds, a total of 1,095,000 (3000 x 365) potential patient days would be added to the entire (public plus private) hospital system in Lebanon. The analysis above has shown that in order for the MOH patient day cost, allowing for replacement, to equal the LL 300 average patient day cost currently reimbursed to the private hospital sector, public hospitals must achieve an average occupancy rate of 80%. This means that public hospitals would have to provide 876,000 patient days of service (1,095,000 x .8). Given the assumption of fixed demand for hospital services, private sector patient days of service must decline from 1,138,800 to 262,800 (1,138,000 - 876,000). This would imply a private hospital sector occupancy rate of roughly 14% (262,800 / 1,898,000).

Glancing at Table 3.8.2.1, one sees that private sector hospital patient day costs would exceed LL 600. If private hospitals costs are actually higher than those assumed in Table 3.8.2.1 as the MOH contends, reimbursement per day of

patient care in the private sector would also be higher. Thus the answer to the second question posed at the end of Section 3.8 is clear, namely that if the MOH were to build 3000 more beds, the private hospital sector may well cease to exist, unless public sector reimbursement agencies were willing, at least, to double the rate of reimbursement paid per patient day of private hospital service.

Some readers may object to the assumption of fixed hospital demand. However, if the demand for hospital services is not constant, there is little or no basis to the MOH contention that constructing and operating a greater number of public hospital beds would reduce expenditures of public funds. If the demand for hospital services increases as the result of expansion of public hospital beds, the public is likely to end up spending more on hospital services, both public and private. To the extent that public hospital costs are somehow lower and that public hospitals are able to attract patients away from private hospitals, patient day costs in the private hospital sector will rise requiring higher reimbursements from public sector funds, thus attenuating any possible cost savings to Government.

If Government were to contemplate replacement of hospitals over a longer interval of time, say 30 years, obviously total operating costs would be lower, and the case for building more public hospitals, on the surface, would appear stronger. However, public hospitals that are older than 20 years, even if well maintained, are not likely to be able to offer a level of qualilty of service and amenity sufficient to be able to compete effectively with an aggressive and rapidly growing private hospital sector. Thus we rule out longer replacement periods.

The answer to the third question posed at the end of Section 3.8 concerns what it would cost to build and operate 3000 additional public hospital beds. Given the assumptions stated in Section 3.8.1 above, Table 3.8.2.2 below presents a summary of this information, also showing admissions and patient days as well as costs, all according to occupancy rate. Note that the total initial costs of constructing 3000 new beds is assumed to be LL 1.32 billion (LL 440,000 x 3000) and that roughly LL 87.0 million must be set aside and invested annually for capital replacement (LL 28,893 x 3000), see column (5) of Table 3.8.2.2.

Table 3.8.2.3 below presents cost projections according to levels of occupancy, assuming that recurrent medical costs per patient day excluding costs of capital replacement, previously assumed to remain constant at LL 200, grow at a rate of 10% compounded annually. All other assumptions remain the same as in Table 3.8.2.2.

3.9 Summary of Financial Sector Problems and Issues and Implications for Policy

Aside from the various problems and weaknesses that exist with regard to health care financing mechanisms in Lebanon, it is clear that health sector issues go far beyond the need for consolidating the activities of financial agencies. Such a consolidation would provide many benefits, but in order to have maximum impact, financial policies must be linked to and thereby reinforce an overall health sector strategy and policy that is realistic in the Lebanese context.

The current policy of the contemplated massive expansion of the public hospital sector, while on the surface has considerable appeal, appears to present

Table 3.8.2.2

Costs of Operating, Admissions, Patient Days Associated with 3000 Public Hospital Beds, According to Level of Occupancy

(1) OCCUPANCY (%)	(2) ADMISSIONS	(3) PATIENT DAYS	(4) RECURRENT COSTS EXCLUD. CAPITAL (LL.M)*	(5) AMORTIZED CAPITAL REPLACEMENT COSTS (LL.M)	(6) TOTAL COSTS (LL.M)
20	36,500	219,000	43.8	87	130.8
40	73,000	438,000	87.6	87	174.6
60	109,500	657,000	131.4	87	218.4
80	146,000	876,000	125.2	87	262.2
100	182,500	1,095,000	219.0	87	306

*Patient days x LL200.

Source: Calculations of the authors.

Table 3.8.2.3

Projections of Costs by Level of Occupancy, Assuming 10% Compound Annual Growth in Recurrent Medical Costs Excluding Capital Replacement

OCCUPANCY RATE (%)	1. RECURRENT COSTS EXCLUDING CAPITAL* (LL.M)				2. TOTAL COSTS** (LL.M)			
	5 yrs	10 yrs	15 yrs	20 yrs	5 yrs	10 yrs	15 yrs	20 yrs
20	70.5	113.4	182.2	294.6	157.5	200.4	262.9	381.6
40	141.0	226.9	365.7	589.1	228.0	313.9	452.7	676.1
60	211.6	340.3	548.6	883.7	298.6	427.3	635.6	970.7
80	282.0	453.8	731.5	1178.2	369.0	540.8	818.5	1265.2
100	352.6	567.2	914.3	1472.8	439.6	654.2	1001.3	1559.8

*Recurrent costs per patient day are LL322, LL518, LL835 and LL1345 at the end of 5, 10, 15 and 20 years respectively

**Total of recurrent costs, excluding capital, plus LL87.0 Million of annualized capital replacement costs.

considerable strain on GOL fiscal, administrative, and management capacities. This is not to say that a case cannot be made for constructing some additional public hospital beds. However, this is to say that the economic rationale for a large expansion of public hospital bed capacity is, neither compelling, nor justified. Thus, it appears to the authors that the GOL ought to give serious consideration to various alternative health sector development policies, that would be less demanding of public sector resources.

In addition, it would be extremely useful if financial management were strengthened and reformed in a manner so the resulting financing mechanisms would assist in furthering the attainment of health sector rehabilitation and development goals. Given the current situation existing in Lebanon, a great deal can be said for Government's adoption of a strong regulatory posture with respect to the private medical sector. A large volume of public sector reimbursement does not necessarily put Government at a disadvantage vis a vis the private medical sector. In fact, it presents Government with an opportunity to use financial reimbursement broadly as an instrument of health sector policy. The elements of such a broad policy are elaborated in the immediately following section of this report specifying the authors' conclusions and recommendations.

4.0 Conclusions and Recommendations

Recommendations are presented in subsections 4.1 and 4.2. Subsection 4.1 presents what the authors feel are essential necessary strategies for improving the current health services delivery system. These we call system imperatives. Subsection 4.2 presents an overall financial strategy that encompasses most of the system imperatives presented in Subsection 4.1. This financial strategy consists of establishing and operating what the authors of this report call a "National Health Security System" (NHSS).

4.1 System Imperatives

Minimal essential strategies necessary for improving the performance of the Lebanese health services delivery system are listed and elaborated individually below.

4.1.1 Health Sector Policy

In reviewing existing health sector financing mechanisms, various weaknesses have been identified. However, the authors are very much aware that changes in financial mechanisms alone can do little to improve the health services delivery system. In order for the financial incentives that are incorporated into a system of financial mechanisms, policies and procedures to assist in improving the performance of the health care system, there must be consistency between the policies being implemented by both medical and financial decision makers. Thus the policies that are required in order for the recommended financial strategy to have maximum supportive effect must be presented clearly prior to specifying a cost effective financial strategy that is consistent with the allocation of GOL resources, demand and supply factors, lost containment and other elements.

Due to various factors, partly arising as a result of the war, Lebanon has a vigorous private health sector that is rich in resources, both physical and professional. In planning, budgeting and forming policies for the future, the GOL should view both private sector and public sector health resources in the same light, as potentially being mobilized toward assisting the government in meeting the health needs of the population. In doing so, comparatively less emphasis should be placed on expanding public sector services delivery systems and greater commitment and will should be devoted to regulating the private health sector in a fashion which brings it into a more effective partnership with government in achieving the nation's health sector goals.

There is a need for public health facilities and publicly provided medical services to cater for the needs of the population for specialized services and to cater for the needs of the poorest of the poor. Reliance cannot be placed on the private sector to provide all the health services that a nation needs, because there are not sufficient private incentives to do so. In the interests of placing the public hospital sector on a firmer financial footing, there is need to allow government hospitals to admit strictly private patients and to receive reimbursement for services rendered to eligible patients. However, there is no reason in principal, particularly from an economics perspective, not to rely on the private health sector to provide the bulk of medical services, if efforts are made to insure that the private health sector behaves responsibly.

Principal reliance on private sector provision of health services is appropriate in Lebanon, given the nation's strong commitment to private enterprise and the fact that 80-90% of health services are currently being rendered by the private health sector. However, greater emphasis should be

placed on effective regulation that improves quality of service, medical practice and performance and which serves to contain costs, and reduce duplication of facilities and other types of wastage throughout the system, both public and private. This policy is recommended in contrast to an apparent and contemplated GOL policy of expanding the public medical care facilities so that it can more effectively "compete" with the private health sector. In the judgement of the authors, there is no economic justification for anything other than a modest and selective expansion of public sector medical facilities in the next 5-10 years.

Equally important, there is no economic justification for government to tolerate intimidation and dictation from a large and powerful private health sector which operates virtually in an uncontrolled fashion, serving individual and private interests which may be divergent from the collective interests of the Lebanese people. The private health sector should be brought under control and induced to work more effectively on behalf of meeting the health needs of the nation. The authors admit that in certain selected cases, political imperatives, in the short-run, may overrule objective economic and medical rationales. However, in the long-run, economic and strictly medical realities ultimately prevail. Thus, the general strategy recommended in this report places emphasis on regulation backed up and linked to a system of financial incentives which tends to harness public and private sector health resources to a common task, namely improving the health status of the population. Specific components of this strategy are presented immediately below.

4.1.2 Specific Components of Strategy

4.1.2.1 Consolidate and Unify Public Health Sector Reimbursement

Basically, we recommend consolidating public sector reimbursement into a single entity to achieve greater uniformity of benefits and greater equity in terms of assessments required to fund operations. This agency would serve as a primary vehicle for giving positive or negative sanction to public and private health sector performance, as appropriate. A large unified reimbursement agency possessing control over the bulk of public sector funds available for payment for health services delivered in Lebanon can exert sufficient power over the private sector necessary to improve its performance. This agency, the NHSS, is described in detail in Subsection 4.2 below. It will take some time to form and thus can extend coverage to the entire Lebanese population only gradually over the years to come.

4.1.2.2 Rehabilitate the Public Curative Sector

The GOL should concentrate for the next several years on rehabilitating existing elements of the public health care delivery system including hospitals, clinics, health centers, and other outpatient facilities. The GOL contemplated policy to fill all gaps in the current system in order to "correct" the gaps and maldistribution in existing health facilities principally through the construction of new public hospitals, autonomous or otherwise, cannot be justified on economic grounds.

Additional public hospital beds possibly could be justified on political grounds. However, even in this case, construction of additional hospitals should be preceded by a careful assessment of needs weighed against alternative modalities of delivering health services (i.e., health centers) many of which may involve reliance upon private sector initiatives.

In all cases the recurrent cost implications of newly constructed facilities must be carefully taken into account. (Section 3.0 of this report presents analysis on recurrent costs of hospitals.) In deciding whether or not to construct additional public hospitals to fill gaps determined on the basis of assessment of needs, the GOL should also consider the benefit/cost implications of subsidizing the private sector to take the initiative to fill the apparent gap in the availability of needed health services. However, it warrants stressing that rehabilitation of public sector health facilities should be given far greater emphasis than new construction.

4.1.2.3 Improve Public Sector Health Services Facility Performance

In addition to rehabilitation, the standard of performance of public sector health facilities must be improved to make them more acceptable to consumers. As a minimum, the following will be required:

- Improved maintenance of building plant and equipment.
- Develop and institutionalize a compensation plan sufficient to attract an adequate number of committed staff of medical professionals and other staff to public health facilities.
- Improve the quality of medical practice performance through developing and maintaining adequate patient records, tissue committees, professional peer review boards and committees to assess the appropriateness of the management of cases of illness including diagnosis, treatment, discharge criteria and follow-up.

4.1.2.4 Strengthen the Financial Base of the Public Hospital Sector

The Autonomous Hospital Act of 1978 and the proposed Area Health Authority legislation open the door for significant opportunities for strengthening the financial structure of the public hospital system. We support the thrust and principles of these two acts of legislation and urge the adoption of the following recommendations we understand are permitted under these legislative initiatives:

- Permit the newly constituted NHSS to reimburse public hospitals for basic medical care on the same basis as certified private hospitals.
- Allow public hospitals to admit private patients, when bed availability permits, and receive payment for amenity services from private sources (i.e., out-of-pocket and private health insurance or both), over and beyond the level of reimbursement provided by the NHSS.

4.1.2.5 Strengthen Primary Health Care in Both the Public and Private Health Sectors

Greater emphasis must be placed on primary health care, including illness prevention and health promotion, so as eventually to reduce the need for curative services. This requires a change in the priorities and attitudes of practicing physicians in both public and private sector outpatient facilities and treatment units. Long-run solutions would include modifying medical teaching and training curricula to give a greater emphasis to preventive and community medicine and the retraining of existing doctors to impart an enhanced appreciation of the advantages of emphasis on illness prevention and health promotion in medical practice. However, these innovations will take time to develop, and in any event, they would have to be reinforced in connection with actual medical practice. The latter activity can be initiated now. The authors suggest the following be required of physicians and other health professionals practicing in public and private outpatient facilities:

- Require the development and maintenance of adequate outpatient records that include as a minimum a brief medical history, major physical findings, chronological record of diagnosis and treatments, including all drugs prescribed and all adverse reactions.
- Require the establishment and maintenance of standards of health promotive and illness prevention measures, including as a minimum regular physical examinations, and appropriate immunization programs for children and pregnant women.

4.1.2.6 Rectify the Maldistribution of Health Manpower Resources

Health manpower is currently concentrated in a few other major urban centers. The Area Health Authority legislation would bring greater attention to making health services available more broadly to the entire nation. But in doing so, the directors and other managers of the system would encounter great difficulties in recruiting adequate numbers of health professionals to the public system, autonomous or otherwise. Therefore, in response to the Minister's request, the authors recommend force placement of medical personnel upon graduation and/or the adoption of a compensation plan under the legislation giving degrees of autonomy to public sector institutions as follows:

- Professional compensation would consist of a package of compensation components including a base salary, earnings from medical practice up to a maximum, housing allowances, education allowances for the professional and for dependent children, and a pension which would not become vested until after a specified number of years of service.
- The package of compensation should be varied and made more attractive to professionals recruited to serve in areas currently under served medically, and which are more remote and which offer less amenity than posts located in Beirut and other major urban centers.
- Compensation for performance of medical acts should be graduated so as to diminish gradually as the maximum allowance compensation is reached, in the interests of reducing incentives to "over supply" medical procedures.

4.1.2.7 Foster Alternative Private Sector Initiatives

Establishing a broader beneficial reimbursement mechanism by itself will neither fully address the maldistribution of health care in Lebanon, nor improve the quality of services. In fact, it could further stress the system by driving up costs and by leading to abuses.

It should be noted that GOL adoption of the specific suggestions presented in 4.1.2.7.1 - 4.1.2.7.3 below are not system imperatives in a strict sense. Rather, it is imperative only that the GOL adopt an attitude of giving more attention to experimentation with alternative ways of delivering health services in the private sector as a useful alternative to expanding strictly public sector provided health services.

The challenge will be to institute and support reforms and innovation in both the public and private sectors that will make health care better distributed and more comprehensive. The private sector has efficiencies which are associated with the free enterprise system and these possibly could be built on. Three strategies are suggested for attention.

4.1.2.7.1 Link Prepayment with Comprehensive Health Care Delivery

A problem with traditional health insurance is that carriers have little incentive to control medical care costs. There is little or no control over the content or quality of care which typically is fragmented.

A private sector alternative that addresses many of these problems is to link a comprehensive health care package to prepayment for a specified population to be served. Providers, physicians, and facilities are organized into a delivery system that guarantees to provide specified services for a predetermined fee--hence providers are at financial risk and have an incentive to maintain health and reduce costs. These entities, called "Health Maintenance Organizations" (HMOs) can have various arrangements between physicians, and between physicians and hospitals. Such an approach to health care delivery has been suggested for Area Health Authorities by Professor Bashur and is strongly recommended for consideration by the authors of this report.

Establishing an HMO requires careful assessment of the potential market and whether necessary components including a management plan and physicians, facilities, and a health and management information system can be organized. A protocol for such an assessment is included as Annex C to this report.

4.1.2.7.2 Expand Commercial Health Insurance

Commercial health insurance presently plays a very small role in financing health services in Lebanon. In other countries, e.g., the U.S., some commercial insurance firms recently have assumed a leading role in developing innovative health care systems, including HMOs. An attempt should be made to interest a major insurance company with health care experience to survey the potential in Lebanon. Companies like Blue Cross and Blue Shield in the U.S. are non-profit entities which could be approached to undertake such a survey and to give recommendations.

4.1.2.7.3 Upgrade the Management of Private Hospitals

Involvement of professional hospital management firms with private hospitals in Lebanon could lead to a higher level of patient care and reduced costs. This avenue should be explored.

4.1.2.8 Enforcement of Legal Tariffs

The uniform fee and service tariff for third class services should be published and managers of private and public facilities, as well as health professionals, should be adequately fined or otherwise be punished for violations and abuses.

4.2 National Health Security System (NHSS)

4.2.1 Guiding Principles:

It is the conclusion of the U.S. AID Health Sector Financing team that public sector reimbursement should be consolidated within a single public sector agency. This agency should establish a uniform reimbursement tariff, uniform reimbursement rates and standards for all individuals regardless of type and place of employment. While it should be established as a basic principle that every individual shall be entitled to receive services regardless of ability to pay, it also should be established as a principle that every individual should pay something for health services received, either in the form of taxes or out-of-pocket payment at the point of service delivery, or both. Ideally rates of

individual payment would be graduated according to the income and wealth class of individual members of the population.

The unified public sector health service financing agency, the National Health Security System (NHSS), would provide uniform and standard reimbursement to all citizens for a minimum set and class of services with exception only in the case of military and public security forces who will receive all services free and civil servants who will receive levels and qualities of services commensurate with rank and grade as is the case currently. Public funds would be made available for paying the medical expenses on behalf of the truly medically indigent, who would include the very poor, and those afflicted with catastrophic illness.

Thus with only rare exception, NHSS would provide entitlement to eligibility for reimbursement for a minimum set and class of services. Individuals and/or their employers may elect to buy supplemental health insurance or pay out-of-pocket cost for greater volumes and/or higher quality services as they wish. Reimbursement by the state for the minimum set and class of medical services on behalf of the bulk of the population shall be paid to both public and private medical services providers. Public hospitals, operating under the Autonomous Hospital Act (1978) and the soon to be legislated Area Health Authority Law, shall have the right to accept payment from the NHSS and co-payments made by individuals who enter under the reimbursement coverage provided by the NHSS, as would also be the case for certified private hospitals and clinics. Public hospitals would also have the right to treat and to receive compensation for services provided above and beyond the minimum set and standard of medical services for which reimbursement is provided by the NHSS, from either private insurance or direct payments by individuals. However, no public hospitals and no certified private hospital would be able to refuse an individual seeking services for which eligibility is entitled under the NHSS. Thus it is the responsibility of the Autonomous Hospital Board and the Area Health Authority to insure that there is an adequate number of public and private hospital beds available in each region of the country to serve all citizens electing to receive the minimum set and standard of services for which reimbursement is eligible under the NHSS.

4.2.2 Reimbursement Standards

In general, the rates of reimbursement for hospital services would be based on the recently established uniform hospital tariff developed by the Task Force on Health Care financing, MOH. This tariff applies to what is now called "third-class services".

In connection with establishing the NHSS, the term third-class service shall be replaced with the term basic medical care. Thus hospital services in either public or private hospitals would be of two types, basic medical care services for which all citizens are entitled for reimbursement, and extra services of an amenity sort which individuals may elect to receive and to pay for entirely from private health insurance or out-of-pocket or both, if applicable. The NHSS shall pay 85% of the costs of basic medical care rendered in certified private hospitals with the patient paying the remainder. In the case of the true medically indigent, the patient shall be required to pay a maximum of LL 500. Cases of medical indigency shall be certified by the Director of the NHSS, after a review of the income and wealth status of the individuals of concern.

Members of the army and the public security forces would receive basic medical care hospital services free at military hospitals, and in certified private hospitals in the absence of the availability of military hospital services, with officers receiving levels and qualities of service commensurate with rank as is the case currently. Contract military and public security force employees and their dependents would be covered by the NHSS and thus be eligible for reimbursement for basic medical care services received in public, including military hospitals, and certified private hospitals at the same rates as all other Lebanese citizens.

Thus military officers and civil servant employees would be entitled to reimbursement of levels and quantities of services as current ranks and position warrant in the current system.

Outpatient services would be reimbursed at 70% of cost to all persons covered by the NHSS with service being rendered in public and private hospitals, clinics, health centers, dispensaries, or physician offices as patients may choose. Contract military or public security forces employees and their dependents would be eligible for reimbursement of 70% of out-patient services rendered at military medical facilities as well as at other public and private health services delivery units.

In true cases of medical indigency, full costs of outpatient medical services would be paid by the NHSS, if approved by the Director after a review of the income and wealth circumstances of the individuals of concern. Both the level of reimbursement of the costs for inpatient and outpatient services would be reviewed and possibly adjusted periodically.

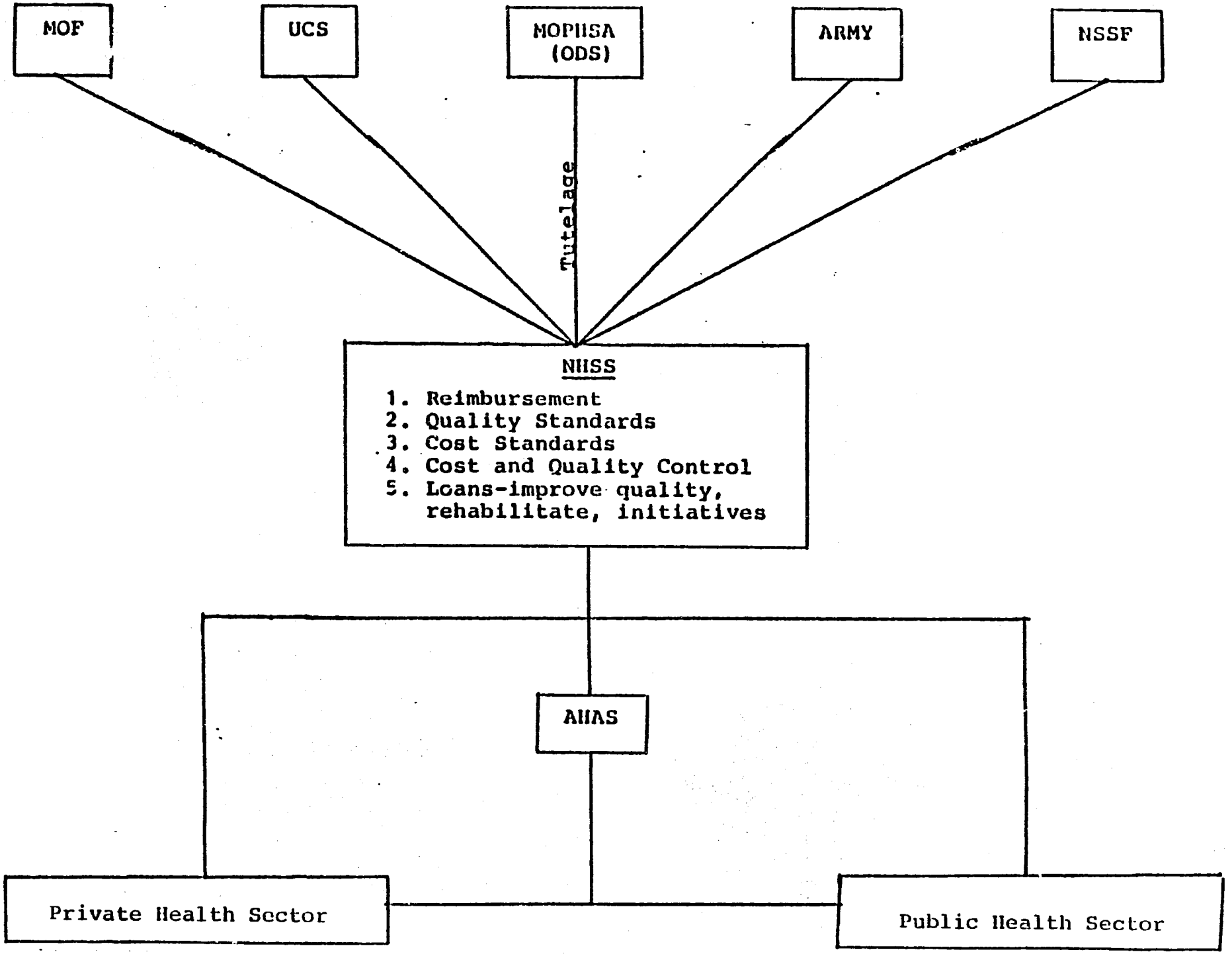
4.2.3 Organization and Activities

The NHSS would consolidate and administer the medical cost reimbursement activities currently conducted by the Union of Civil Servants, the Army and Public Security forces, the MOH and the NSSF. Figure 4.2.3 below illustrates some of the salient features of the NHSS, proposed activities, and its relationship to the public and private health sectors.

The organization tasks and functions of the NHSS are briefly summarized below. However, before summarizing these matters, it should be noted that prior to establishing the NHSS, government should have adopted a uniform single standard fee and service tariff. Second, government must have demonstrated its will and commitment toward supporting the NHSS in enforcing the uniform tariff, improving the quality of medical care in both the public and private sectors, and to punishing private and public sector abusers of the uniform tariff by withholding reimbursement in such cases. Third, the government must also be willing to support the NHSS in denying reimbursement to medical services providers who do not meet minimum standards of services and medical performance.

Although not imperative, it would be helpful if Government were to commit itself to assisting private and public sector medical services providers to upgrade services and standards, offering loans for these purposes, if need be the case. It would also be useful if Government committed itself to fostering new private sector initiatives including establishing HMOs and innovative private health insurance plans that incorporate reasonable standards of quality and cost containment features. And it would be helpful if Government allowed the NHSS to reimburse medical services costs above uniform tariff rates in selected cases in

Figure 4.2.3 - Possible Organization and Activities of NHSS



which public and/or private sector medical services delivery groups expand services of appropriate quality into areas currently medically underserved.

It should also be noted that Government should prescribe the appropriate staffing of the new NHSS in the law establishing the agency. This condition would be met by the development and necessary legal approval of a staffing plan or protocol that establishes the necessary posts and terms and conditions of employment and training that would be necessary to recruit and retain required staff in the NHSS. Some personnel and staff could be transferred to the NHSS from existing agencies or reassigned within their respective agencies, as appropriate.

The newly constituted NHSS should acquire appropriate staff and develop an organizational configuration that is adequate to perform its functions. The core of the new NHSS staff would be the existing staff of the NSSF. It is impossible for the team to design the new agency and to determine staff needs at this time. However, certain activities vital to the NHSS are very clear. The nature of these activities is discussed here in terms of possible offices or directorates that are likely to be established by law. Each of these key offices and principal activities are listed and briefly discussed below:

4.2.3.1 Auditing and Cost Verification

This office would be staffed with medical inspectors, accountants, and clerical personnel, who would verify the appropriateness and accuracy of billings, identity of patients and their receipt of services, and other matters relating to auditing and cost control.

4.2.3.2 Office of Facility Certification and Rate Setting

This office would certify eligibility of private hospitals for reimbursement, classify hospitals according to meeting medical standards for providing the basic medical care services and establishing rates of reimbursement for types of hospitals according to staffing patterns, availability of services, utilization and medical practice and performance standards.

4.2.3.3 Quality Assurance

It is vitally important that reimbursement be linked to quality assurance of medical practice and performance. This requires that quality assurance programs be required and introduced gradually over time in order to develop and maintain medical performance and practice standards. Development and maintenance of such standards and their gradual improvement over time would be made a condition or requirement for institutional or individual physician eligibility for reimbursement by the NHSS. Example of medical practice and performance standards activities would include maintenace of standards concerning:

- adequate medical records
- reasonable length of stay
- reasonable numbers of various types of operations and procedures
- reasonable drug prescription by type and volume
- tissue committee and utilization review criteria and procedures.

4.2.3.4 Data Collection, Analysis and Systems Monitoring

This office would be primarily concerned with regularly collecting data concerning numbers of beneficiaries, utilization, and costs of all elements of the system. This would include monitoring accurate cost information by each type of inpatient and outpatient medical service activity for all facilities and

individual providers both public and private. This group would work closely with the Health Planning Unit, the AHA Directorate and the Medical Care Directorate in the MOH. The NHSS would periodically publish and distribute analyses of data and information through government and private sector channels.

4.2.3.5 Office of AHA Liaison

The NHSS, in some cases, would be involved in negotiating with and paying lump-sum payments to AHAs. In any case, information concerning the reimbursement of the costs of health services provided to public and certified private health providers located in a functioning AHA would be provided to AHA authorities to assist them in planning, organizing, and implementing comprehensive health programs in their areas. Also, the NHSS could encourage the formation of HMOs providing start-up grants and technical assistance within AHA regions if this is regarded as desirable. Such HMOs would involve prepayment for a comprehensive package of health services including preventive and promotive as well as curative services. This office also could make recommendations to the Director concerning the advisability of making loans to private medical sector groups to enable them to meet certification standards or to provide, within these standards, additional services deemed to be necessary and justifiable. It could also advise the Director on the advisability of paying higher than standard tariff rates to public and private health service providers who are expanding service delivery into medically underserved areas. This office would also advise the Director on the appropriateness of private sector initiatives generally, including innovative private health insurance policies and programs.

4.2.3.6 Office of Loans for Quality Improvement and Rehabilitation

This office could be created if, and only if, it is judged to be desirable for the GOL to provide loans to the private sector to upgrade quality of care and to foster private sector initiatives. Such a loan program is not essential to the overall financial reform activity which would be the central thrust of the NHSS. If a loan program were established, this office would assist public and private sector providers to meet quality medical practice and service performance standards and to rehabilitate facilities and services damaged by war. In the event contracts (and certification) are cancelled between the NHSS and private providers, a determination would be made as to the need for a loan to the private provider which would enable it to meet the necessary standard in a reasonable time. Rehabilitation of either public or private facilities would be determined on the basis of strict assessment of needs for services in a particular area. When considering the rehabilitation of public sector facilities, attention would be given to existing private facilities and to the cost implications of subsidizing private sector initiatives as contrasted to rehabilitating existing public facilities.

4.2.4 Costs and Revenues: Some Alternatives

4.2.4.1 Estimation of Costs of Complete Coverage.

Both cost and attendant revenue estimates are extremely difficult to provide at this time. However, in the interests of providing some rough figures to use as a basis for further planning and thinking toward establishment of the NHSS, the team provides some tentative cost projections based on data provided by the NSSF. The data are based on actual operating experience during 1982, adjusted to incorporate the effects of adopting the new uniform fee tariff developed by the Task Force on Health Care Financing, MOH.

The ultimate goal of the NHSS would be to extend coverage to roughly 35% of the population (1.0 million people) who currently are not directly covered by any public sector reimbursement agency other than, possibly, the MOH.

The NSSF data are based on the utilization and reimbursement experience of the 215,000 insureds in the program in 1982. The basic unit is the insured who is employed in the private sector and whose wage currently is assessed at the rate of 1.5%, while the employer contributes 5.5%. The maximum contribution required of an employee is LL 750 per annum. Dependents of insureds, including wife if unemployed, husbands of working wives if retired or invalid, children (attached to the husband's entitlement unless wife is working and husband is deceased), and aged dependents 60 years of age or older if living in the household of the insured, all are entitled to the same benefits as the principal insured. Taking account of all dependents in the system, on the average, there are two dependents who are additional beneficiaries to the total number of insureds, all of whom have the same coverage as insureds.

The total population of beneficiaries is 215,000 x 3 (insured plus 2 dependents) or 645,000 persons. This population represents 21.5% of a total estimated population of 3 million and 23.5% of the 2.75 million total number of Lebanese estimated currently to be living in-country.

Some have concluded that NSSF data indicating only two dependents per insured, are not representative of the total population. They seem to feel that the population is comprised essentially of families consisting of a working male, a wife and an average of 3.6 dependents.

This is a misconception. In fact, only a fraction of the eligible population is married, and the rate of marriage has been delayed drastically due to economic circumstances produced by the war. Also no one really knows what the demographic structure is currently. The social pattern that will emerge after eight years of war is not entirely predictable. Thus, if one takes into account that both working wives and husbands appear as individual insureds in NSSF data, the population representativeness of the NSSF is probably quite good.

The last point is rather compelling. Given that a family consisting of a working wife, and a working husband and three children would appear in the NSSF data as two insureds plus three dependent children, the average number of dependents per insured in this case would be 1.5. Given that there is a large proportion of unmarried persons of working age in the population, it is easy to see that on the average each working insured may well have only two dependents.

In actuality, workers covered under NSSF are 75% male and 25% female. Of the men, 43% are married with a wife and children. And overall, the average family does have five members.

While those covered by the NSSF consist largely of urban workers, the actual family composition appears to compare favorably with the general population with the exception of rural agriculturalists who are known to have more children per household than urban families. However, in looking at rates of medical services utilization by categories of individuals covered by the NSSF, the expected days of hospitalization are distributed as follows:

Insured men or women	.35
Dependent wife	.85
Dependent child	.14
Dependent parent or other relative	.82

Thus comparing rates of hospital utilization, children have very low utilization. Extrapolation of these data to cover all Lebanon including agriculturalists is likely to overstate utilization, not understate utilization as some fear.

While there may be other elements of non-representativeness in the NSSF data, these cannot be established. Any appropriate adjustments can not be made, due to the present lack of demographic and social pattern data which do not exist in Lebanon under current circumstances. Thus while there are some shortcomings in the NSSF data, they appear to be the best available on which to base projections of the costs of an expanded health care reimbursement system.

4.2.4.2 Costs of NSSF System Extrapolated for All of Lebanon

A detailed breakdown of the costs of the NSSF 1982 population, adjusted to reflect the new uniform tariff, is presented in Table 4.2.4.2.1 below. This shows the costs of the NSSF in reimbursing its insureds in the year 1982, with cost adjusted upward to reflect the adoption of the new uniform tariff of fees, services and procedures. The data are presented on the basis of costs per insured (215,000 persons). The costs per insured are LL 760. Mr. Gaston Cordahi, Chief Actuary, NSSF and the Team Leader worked out the necessary calculations required to estimate the costs of providing third class coverage to the entire Lebanese population of 3 million persons, using costs and expected rates of utilization as presented in Table 4.2.4.2.1.

Rates of utilization in the 1982 NSSF population are 5.5 medical consultations or visits, .93 hospital bed days for illness, and .155 hospital bed days for maternity per insured, respectively. The cost of hospitalization is LL 282.9 per insured, which includes costs of wife (or husband) and other dependents (including children) who are covered at the charge of the insured. The total of hospital bed days is the sum of days of hospitalization for illness and the number of days of hospitalization for maternity. Hospital bed days for illness per insured plus hospital bed days for maternity per insured is .93 plus .155 or 1.085. Dividing the total cost of hospitalization per insured, LL 282.9 by the total bed days for illness and maternity per insured yields an average reimbursed cost per hospital patient day of LL 260.24 per insured. To this must be added LL 12.20 which is the cost per day of hospitalization per insured incurred in connection with persons treated abroad, yielding a total cost per hospital day of treatment per insured of LL 272.92. The result is a cost per hospital day per insured that includes the weighted costs of hospitalization for illness, maternity and treatment abroad of persons covered by the NSSF.

Two additional factors were taken into account in arriving at a final cost per day of hospitalization per insured. First, 7% was allowed for administrative overhead and 5% was allowed as a safety factor. The resulting figure, LL 272.92 x 1.05 x 1.07 yields LL 306.62 as the cost per day of hospitalization per insured. Dividing 1.085 (the total of hospital days for illness and hospital days for maternity per insured) by the average number of insureds plus dependent beneficiaries, 3, yields .36 as the average number of days of hospitalization per

Table 4.2.4.2.1 - NSSF Costs: 1982 (LL)

I. Ambulatory Care	Per Insured/year			
Consultations - Visits	24.04 x 5.5 c.v.	= 132.22		
Medical procedure	3.5 x "	= 19.25		
Drugs	46.0 x "	= 253.0		
Laboratories	5.33 x "	= 29.32		
X-Rays	4.07 x "	= 22.39		
Various	0.15 x "	= 0.82	457.0	
Maternity (outside hospital)	329.0 x "	= 4.93	4.93	461.9
II. Hospitalization				
Care at the hospital				
Bed.	60.44 x 0.93	= 65.51		
Dr. Visit at hospital	17.40 x "	= 16.18		
Drugs	36.92 x "	= 34.34		
Laboratory	18.11 x "	= 16.84		
X-Rays	13.77 x "	= 12.81		
Serum	5.08 x "	= 4.72		
Oxygen	2.68 x "	= 2.49		
Cast	1.78 x "	= 1.66	154.55	
Medical Acts & Surgery				
Acts (surgery 43, 11 and Med 28, 27	60.67 x 0.93	= 56.42		
Operating Room	16.49 x "	= 15.34		
Anesthesia-Reanimation	11.88 x "	= 11.05	82.81	
Maternity				
Bed	70.44 x 0.155	= 10.92		
Act in Maternity	144.10 x "	= 22.33		
Various (delivery room Nursery)	79.32 x "	= 12.30	45.55	282.9
Other				
Treatment Abroad		13.24		
Funeral Fees		2.2/yr		15.44
Total Cost Per Insured				760.24

Source: NSSF

beneficiary based on the 1982 operating experience of the NSSF. Multiplying this rate of expected bed days per person times a population of 3 million people (.36 x 3 million) yields 1.08 million expected patient days of hospitalization for illness and maternity for the total population. (Note that assuming that hospitals operate at 80% capacity occupancy, each bed could provide .8 (365) or 292 patient days annually. Dividing 1.08 million annual bed days by 292 yields 3698 as the number of hospital beds needed to serve a population of 3 million in Lebanon assuming no differences in the pattern of illness and rates of utilization between the entire population and that experienced by the NSSF in 1982. Clearly, location factors, travel considerations, and pockets of need must be taken into account. However, it is very hard to make the case that the existing 6400 beds, fully and effectively rehabilitated and operating, could not meet the bulk of the needs of the Lebanese people for general acute hospital services).

Given that the cost per hospital day including costs of illness, maternity and allowing for administrative costs and an element of safety and treatment abroad is LL 306.62, multiplying this by 1.08 million annual bed days, yields LL 331 million needed for reimbursement for hospital inpatient services on behalf of the entire population.

Table 4.2.4.2.1 reveals that the NSSF population consumed 5.5 outpatient consultations or visits per insured in 1982. Dividing 5.5 by 3 yields 1.83 as the number of outpatient consultations or visits per beneficiary in the NSSF in 1982. Also Table 4.2.4.2.1 shows LL 457 as the cost of ambulatory care per insured with the exception of maternity. The NSSF pays 100% of the cost of maternity services, if rendered outside a hospital. This cost includes prenatal, antenatal, and delivery charges plus medicines prescribed by midwives, and on average is LL 329. This cost when multiplied by .015, the frequency of occurrence of this expense per insured, yields an additional outpatient cost per insured of LL 4.93. Adding LL 457 and 4.93 together gives the total of outpatient services per insured as LL 461.9. Total outpatient costs per insured of LL 461.9, when divided by 5.5, yields LL 83.98 as the average cost of outpatient medical services per NSSF beneficiary in 1982.

Multiplying 1.83 (the average number of outpatient visits per beneficiary) by a population of 3 million yields 5.5 million outpatient visits annually. Multiplying this number by LL 83.98 (the average cost per outpatient visit) yields LL 461.9 million as the total cost of outpatient care for a population of 3 million whose utilization, health needs, and rates of medical costs are the same as the NSSF population in 1982. If a contingency allowance of 5% and 7% administrative overhead is added, the resulting figure (LL 461.9 million x 1.05 x 1.07) is LL 517.9 million. The total cost of outpatient and inpatient medical services reimbursement that would be required to expand NSSF coverage to a population of 3 million (LL 331 million plus LL 517.9) rounded to the nearest million is LL 849 million.

However, the current population living in Lebanon is estimated to be 2.75 million, not 3 million. Thus the costs of expansion of coverage to the immediate population would involve less cost if 250,000 fewer persons need to be covered. The reduction in the costs of inpatient hospital services uitlization would be .36 x 250,000 x LL 306.62, the average cost per day, or LL 27.6 million. The reduction in the cost of outpatient services cost reimbursement

would be 1.83 expected outpatient visits x 250,000 x LL 83.98, the average cost for outpatient visits, at LL 38.5 million.

An additional 35,000 persons would be covered strictly by the military health services. Contract employees and dependents only would be covered by the NHSS. This additional cost reduction on account of inpatient services would equal .36 x 35,000 x LL 306.62 or LL 3.86 million. Cost reductions on account of reduced outpatient services on behalf of military would equal 1.833 x 35,000 x 83.98, or LL 5.38 million.

While part of the outpatient medical services needs of an estimated 195,000 persons are served by dispensaries operated by the OSD, no subtraction is made due to the fact that while 8.0 million of state funds are spent on these programs, OSD units provide social services in addition to outpatient health services. Allowance could be made for outpatient services provided in municipal dispensaries, representing LL 20 million of outpatient services in 1982. However, the authors do not feel that they know enough about these facilities and dispensaries to take them into account at this time.

The sum of cost reimbursement needs to cover the nation through the NHSS would be reduced by 75.3 million (LL 26.5 and LL 39.5 million for inpatient and outpatient costs due to 250,000 Lebanese currently living out-of-country and LL 3.86 and LL 5.38 million on inpatient and outpatient services provided to 35,000 million and public security force direct hire).

One may conjecture as to the desirability of excluding the very rich estimated at 5% of the total population or 150,000 persons. If this were done, additional reimbursement cost savings of 16.6 million (.36 x 150,000 x LL 306.62) on inpatient costs and LL 23 million (1.83 x 150,000 x LL 83.98) on outpatient costs could be effected. Summary data of reimbursement cost estimates of the NHSS according to different levels of population coverage are presented in Table 4.2.4.2.2 below.

4.2.4.3 Estimation of Revenues Needed and Sources

As presented in Section 3.2 of this report, the public sector and the private insurance sector, (the latter defined to include self-insured and private health insurance plans), spent an estimated 551 million in 1982 on health services. This figure includes the sum of the entire MOH budget, and outlays made by the NSSF, UGCS, Military, OSD, municipalities and the private insurance sector. However, for the purposes at hand, one must look at revenue sources available solely for reimbursement of third class health services delivered. Also we exclude municipalities, OSD, and the private insurance sector. Table 4.2.4.2 below presents a summary of revenues immediately available for reimbursement of third class health services.

In Table 4.2.4.2.3, the LL 160 million transferred from the MOF to the MOH as part of the latter ministry's budget is a clear-cut cost-pass-through from the public sector to the private health sector. The case of the NSSF is a bit more complicated. NSSF officials report that, under normal conditions, NSSF collection from wage assessments yields approximately LL L44 million annually. Unfortunately, due to war, the NSSF was not able to make full collections last year. However, indications are that by the end of the year monthly wage assessment collections were at the appropriate level and may be presumed to continue at the appropriate level rate to yield roughly LL 144 million on an

Table 4.2.4.2.2 - Summary of Estimates of NHSS Costs by Level of Population Coverage

	Total Population(m)	Excluded Level of Population(M)	Inpatient Costs(LLM)	Outpatient Cost(LLM)	Total Costs(LLM)
1.	3.0	0	331.0	517.9	849.0
2.	2.75	250,000 out-of-country	303.4	479.4	782.8
3.	2.40	250,000 out-of country plus 35,000 military and public security force direct hire	299.5	474.0	773.5
4.	2.25	All as in 2 and 3 above plus 150,000 "rich"	282.9	451.0	733.9

Source: Calculations of the authors primarily based on NSSF data.

Table 4.2.4.2.3 - Summary of Estimated Public Revenue Sources

Agency	Revenue Sources	volume of Revenues (LLM)
MOH	MOF	160.0
NSSF		
A.	Payroll Taxes	144.0
B.	MOF	36.0
Military	MOD	50.0
UGCS	Payroll Taxes	50.0
		440.0

annual basis. The second element of NSSF revenue presented in Table 4.2.4.2.3 is paid by the MOF which by law is equal to 25% of NSSF expenditures. Given LL 144 million of expenditures the second NSSF revenue component is LL 36 million (.25 x LL 144 million).

Note that although actual expenditures of the NSSF were estimated at LL 144 million in 1982, the new uniform fee tariff adopted by the Task Force on Health, Financing, MOH, is estimated to add to NHSS expenditures by about LL 19 million in 1982 operating expenditure. Thus the total 1982 NSSF expenditures would have been LL 163, had the new fee schedule been in effect. Based on the theoretical expenditure of LL 163 the MOF would be obligated to pay the NSSF roughly LL 41 million (.25 x LL 163 million).

The level of revenue available to the new NHSS from military sources, LL 50 million, consists of an estimate of payroll tax assessments that would be required for the NHSS to reimburse the medical costs of contract employees, and dependents of both military and security force direct hire and contract employees. This could be paid by the MOD as a lump-sum annually to the NHSS, that is calculated on the basis of the average rate of revenue collection per NSSF beneficiary. For example, if the total payroll tax assessment of the NSSF is LL 144 million on behalf of coverage for 645,000 beneficiaries, the rate the MOD would pay for each military contract employee and/or dependent would be LL 223 annually (LL 144 million ' 645,000) multiplied by the number of persons covered. Since the military services currently covers 250,000 persons of which 35,000 are military, a total of 215,000 persons would be covered by the NHSS at a rough cost of LL 50 (LL 223 x 215,000 plus an allowance of roughly LL 2 for extra allowances according to rank privileges.

The LL 50 million for UGSC could also be paid by the NHSS on the same basis as military contributions. The UGSC currently covers roughly 220,000 persons including civil service direct hire and dependents. Total contributions would be roughly LL 50 (LL 223 x 220,000 plus an allowance of roughly LL 1 million for amenity services commensurate with the high rank and status of certain civil servants.

4.2.4.4 Revenue and Cost Imbalances and Some Options

The analysis of the two preceding sections reveal that there would exist imbalances between revenues and costs if the new NHSS were established immediately and coverage were expanded to include persons not covered by any existing system. These imbalances vary depending on the contemplated population coverage. The corresponding estimated levels of expenditures, costs, revenues, and estimated shortfalls (or deficits) are summarized in Table 4.2.4.4 below.

Table 4.2.4.4 reveals that there are significant shortfalls between costs and revenues if efforts were made to establish of NHSS immediately or even in the near future, unless ways can be found to either increase revenues or reduce costs. Various options are explored below.

4.2.4.4.1 Coverage Options

Although it may not be politically feasible, cost reimbursement levels could be scaled down. Restrictions could be placed on the maximum number of days of hospitalization and outpatient visits for which reimbursement would be provided annually, and the number of maternity cases for which reimbursement is allowable per family, the latter restriction encouraging family planning. Restrictions

Table 4.2.4.4 - Cost, Revenues, and Deficits By Population

	Population Coverage(M)	Population Excluded(M)	Total Costs(LLM)	Coverage of NHSS Revenues(LLM)	Deficit(LLM)
1.	3.0	0	848.9	440.0	408.9
2.	2.75	250,000 out-of-country	782.8	440.0	342.8
3.	2.4	250,000 out-of-country plus direct hire Military and Public Security Forces	773.5	440.0	333.5
4.	2.25	All as in 2 and 3 above plus 110,000 "rich"	733.9	440.0	293.9

Source: Calculations of the authors based on preceding tables.

could also be placed on various types of services, dental care, prosthetic devices, eye glasses, etc. Reimbursement rates to hospitals could be reduced gradually according to days of care rendered beyond average lengths of stay for cases of given degrees of severity.

Population coverage should be expanded gradually with every individual being required to carry a health card indicating eligibility for coverage by the NHSS system. These cards could be validated annually by the NHSS upon individuals presenting proof of having contributed to the NHSS system. Civil servants and private sector employees covered by the NSSF could present documentation that they are employees in good standing and are paying payroll taxes. Employers themselves could be required to acquire certificates of compliance from the NHSS that they are currently complying with the payroll assessment law and supply lists of employees for which payroll taxes have been paid to the NHSS system.

The self-employed in commercial business, service sector and agriculture could gradually be brought into the system upon payment of a lump sum tax paid annually with a stamp being affixed to the NHSS eligibility card. In this way coverage could be extended gradually, with additional revenues brought into the system as coverage is extended.

4.2.4.4.2 Revenue Enhancement Options

Currently, insureds covered under the existing NSSF are required to pay 1.5% of earnings, up to a maximum of LL 750 per annum, and the employer pays 5.5% on this same wage base. The maximum employee contribution is reached at LL 50,000 of wages per annum (.015 x LL 50,000 = LL 750). Thus to the extent that there are employees covered by the NSSF who earn in excess of LL 50,000 per annum, the current assessment scheme is regressive. Such a wage base assessment produces a tax that is regressive, because the total tax paid by high wage earners (earning over LL 50,000 per annum) is a smaller proportion of income than the proportion of tax paid relative to income of low wage earners.

A non-regressive, but proportional tax would exist if all insureds of the NSSF were assessed a flat 7% of wages. A 7% proportional tax on all wage income of insureds would provide a comprehensive tax assessment base. NSSF officials state that the average wage of all employees covered is LL 20,400 per annum. A 7% proportional tax on all wage income excluding allowances would provide LL 307 million (.07 x LL 20,400 x 215,000) or LL 163 million in addition to the LL 144 currently available to the system. To the extent that there are employees earning LL 50,000 or above, the law would have to be changed to require them to contribute 1.5% above all wages, and thus contribute more than LL 750 per annum, which is currently the legal maximum, or the LL 307 million figure would have to be revised downward to the extent that there are substantial numbers of NSSF employees currently earning LL 50,000 or above.

The NSSF has proposed a tax on electricity as a means of raising revenues to finance reimbursement of the costs of hospital services. The proposal is very appealing insofar as, on the surface, it would seem to provide a very comprehensive tax base, since 98% of the Lebanese have access to and use electrical services. However two considerations must be taken into account. First, every ministery would like to finance its operations by levying a tax on such a comprehensive tax base. Second, the electricity board currently is losing money (approximately LL 191 million annually). Thus taxing electrical services

to finance reimbursemennt of medical services does not appear feasible at this time.

"Health taxes" on cigarettes and alcoholic beverages would tend to reduce consumption and thus promote public health, but could be expected to raise only modest sums of revenue. For example, assuming that 1.5 million packs of cigarettes are smoked annually, a 10% tax on an average cost per package at LL 1.75 would yield less than LL .3 million annually (LL 1.75 x .1 x 1.5 million). If 100 million packs were taxed annually, the yield would be 17.5 million; or about 275,000 people smoking one pack a day.

A flat lump-sum tax on physicians who are operating private hospitals and/or clinics would perhaps be more useful as a revenue source. Also, currently income taxes on professional services are largely avoided in Lebanon. It is estimated that income taxes in total produce roughly only LL 200.0 million annually. A tax on private medical practice would also increase the attractiveness of public service from what is the case currently, since taxes of public servants are currently withheld from wages and thus are not avoided, while physicians in the private medical sector are able to avoid paying virtually any taxes. However, given the small numbers of physicians in the system, roughly 2,400, only a rather small volume of revenue could be raised in this fashion. A lump sum tax of LL 10,000 per physician would yield only LL 24 million (LL 10,000 x 2400). Such a tax would not be fair, particularly if levied on doctors in public service. However, this is not to say that physicians in private practice should not be taxed more heavily using lump-sum taxes, better enforced income taxes, or some combination of the two.

4.2.4.4.3 Summary of Options

Summing up revenue enhancement options, revenue sources of greatest significance seem to exist in the area of levying a completely proportional tax on insureds covered by what is currently the NSSF and in the absence of a wage or income base on which payroll income taxes may be assessed in the case of new entrants. Newly covered persons brought into the expanded NHSS system would be assessed a lump-sum entitlement fee. Shortfalls in revenues and costs as presented in Table 4.2.4.4. above range from a high of LL 408.9 to a low of about LL 294 million, the latter figure excluding the 250,000 Lebanese living abroad and 35,000 direct hire military and public security force direct hire, and the 150,000 persons presumed to be rich.

These shortfalls would be reduced significantly if some of the reimbursement restrictions were enacted as suggested in Subsection 4.2.4.4.1 above. However, even with no reductions in services reimbursement levels, taxing all income of current NSSF covered insureds would yield LL 163 million of additional revenue. Subtracting this from the deficit occurring in the event that a population of 2.75 million persons were covered, LL 342.8 yields a deficit of roughly LL 180 million. Since the target population of expanded coverage consists of approximately 1 million persons, expanded population coverage entitlement fees of LL 180 per capita on the average would bring estimated revenues into balance with costs. Those currently living abroad could be similarly assessed upon their return to Lebanon, or at even a higher rate, if appropriate and possible.

Since many of those who are presently not covered may be presumed to be low income or even medically indigent, entitlement fees could not be uniform. Also, the State would have to provide additional funds to cover the costs of those who

are medically indigent. Thus the NHSS needs to operate with the anticipation of having a surplus over estimated costs with which to cover the cost of providing for the medically indigent.

By present law the State is obligated to pay 25% of NSSF expenditures which clearly would apply to the newly proposed NHSF. If NHSS expenditures increased by LL 163 million as a result of levying a flat 7% on all wages and salaries earned by employees covered by the system, the State's obligation would increase by roughly LL 41 million. This in principle would provide a modest surplus of revenue over costs in all cases of population coverage. The revenue, cost, and surplus implications of different levels of population coverage and assessments discussed above are presented in Table 4.2.4.4.3 below.

The analysis of revenue sources places principal reliance on private sector employers and employees to finance the expansion of the NHSS system. The authors do not advocate that this be done, because the burden on those currently in the system would be inequitable. A flat 7% tax on total wages would require contributions per insureds currently in the system of LL 1428, with .015 x LL 20,400 = LL 360 and .055 x LL 20,400 = LL 1122 on the average paid by employees and employers, respectively. The LL 1428 compares with anticipated expenditures of only LL 760 annually per insured. The analysis was undertaken for illustrative purposes only, showing that coverage could be immediately extended and financed, if the GOL desires to do so.

The burden on private sector employers and employees would be lessened if the State were able to enforce the current income law better and to assess those currently not covered by any assessment system, roughly 1.0 million living in country and .25 million living out of country, at a higher average rate than LL 175 annually as was assumed for illustrative purposes above.

The crux of the problem lies in the unavailability, under the current situation of tax law and lack of enforcement, of an adequate comprehensive tax base on which to make assessments. There is also a problem in the apparent reluctance or inability of government to determine individual levels of income and wealth as a basis for equitable lump-sum assessments.

Ideally, what the authors would advocate is either a uniform per capita assessment, or one graduated according to expected rates of utilization, either of which being tempered by considerations of ability to pay, such that the rich assume part of the burden of paying for benefits accorded to the poor. In light of the current fiscal structure of the GOL, such an ideal is impossible to obtain. Thus we again emphasize the advisability of only gradually expanding NHSS coverage over a period of 5-10 years, and continuing to seek ways to broaden the fiscal basis of the system in the interests of achieving greater degrees of equity.

Initially efforts could begin with merging the UGCS and the NSSF thus forming the nucleus of the NHSS and working out equitable benefit and revenue structures. This could be done very quickly, say within one year. The next step would be to shift the reimbursement activities of the MOH over to the NHSS. The final step would be to incorporate the reimbursement of the military into an entirely consolidated public sector medical sector cost reimbursement system which would constitute the fully formed NHSS.

Table 4.2.4.4.3 Summary of Added Revenue Sources and Resulting Surpluses of NHSS Depending on Population Coverage

(1) Population (M)	(2) Int'l Deficit + (LLM)	(3)* Add. Payroll Tax (LLM)	(4)** Lump Sum Tax (LLM)	(5) Add. Cont. by State (LLM)	(6) Total (LLM)	(7) Surplus (LLM) (6)-(2)
1. 3.0	408.9	163.0	a. 180.0 (in country) b. 45.0 (out of country)	41.0	429.0	20.1
2. 2.75	342.8	163.0	180.0 (in country)	41.0	384.0	41.2
3. 2.4	333.5	163.0	180.0 (in country)	41.0	384.0	50.5
4. 2.25	293.9	163.0	180.0 (in country)	41.0	384.0	90.1

Source: Calculations of the authors.

* Assumes a flat proportional payroll tax of 7% on private sector employees.

** Assumes an annual lump sum assessment of LL 175 on persons newly joining the system: a) 1 million currently living in country, and b) 250,000 currently living out of country with a lump-sum tax levied upon return.

5.0 Recommendations for Follow-Up Technical Assistance

The authors of this report recognize that additional work needs to be done in order to facilitate the establishment of the NHSS. Technical assistance is needed in numerous areas as described below.

5.1 Establishing Minimum Data Base

Assistance is needed in establishing, maintaining and projecting a minimum consistent data base, including statistics concerning the following:

- Population
- Number in work force
- Gross domestic product
- Salaries and wages
- Number of doctors
- Number of hospital beds
- Number of hospital admissions
- Hospital average length of stay
- Number of outpatient attendances
- Hospital costs
- Total expenditures for health care

It is important that there be a single authoritative information source in the system management and a timely distribution of the information. With a single source for information gathering, processing and reporting, all managers and their staffs would have a common basis for planning and operating the system. Also, the other providers of health care should have access to the same authoritative information. This would be an important step in fostering understanding and coordination among the major providers.

5.2 Study of Determinants of Utilization

Of crucial importance is to develop methods for anticipating changes in utilization patterns. For instance, a change in utilization of any of the items below would have a substantial impact on the cost of health care in the future. The factors determining the following rates are:

- Number of doctors per 1,000 population
- Number of hospital employees per patient day
- Number of hospital admissions per 1,000 population
- Average length of stay in hospital
- Number of outpatient attendances per 1,000 population.

Expected changes in utilization which will be largely the result of changes in the disease patterns and the age-sex distribution should be built into five year projections.

5.3 Development of Standards for Health Facilities

The MOH should review its standards and procedures for inspection, certification and monitoring of medical care facilities, establish new ones and maintain them. Measures to force compliance must be strengthened. Major areas of concern include the following:

- Structural condition of buildings
- Operating safety of mechanical, electrical and other systems including use of explosive gases, radiation producing devices, etc.

5.4 Develop Programs to Improve and Strengthen the Quality of Patient Care

Assistance is needed to develop and strengthen the quality of patient care with establishment of performance criteria and standards to achieve quality assurance, including the following:

- Tissue committees
- Chart review for:
  - Adequacy of medical records
  - Accuracy of diagnoses and appropriateness of diagnostic and therapeutic procedures
- Utilization review to assess whether level of care is appropriate for condition treated--i.e., length of stay, appropriate use of facility and other resources, cost of care, etc.

The Ministry of Health should encourage medical schools to take the lead in developing standards and practical ways to monitor and enforce compliance of these standards. Assistance can be provided to establish linkages between medical schools, the MOH and private facilities in order to provide training for students and house staff concerning the scope of services and quality of care to be maintained in these facilities.

5.5 Assist in the Development of Programs Designed to Contain Costs

The following areas are vital:

- Computer based auditing and cost control.
- Performance cost standards relating to length of stay and proper patient management, including relating diagnosis, treatment, and discharge criteria.
- Standards concerning appropriate referral to hospitals
- Adherence to legal fee and fee tariffs
- Appropriate uses of ancillary medical services
- Development of certificate of need criteria
- Appropriate standards of cost for prospective reimbursement of private and public health facilities

5.6 Establishment of a National Drug Plan

Approximately 40% of health care expenditures in Lebanon are for drugs. The present situation is chaotic with an enormous number of drugs available. Prices for the same generic drug vary greatly.

To rationalize the system, a national formulary needs to be developed and used. An educational campaign directed both at physicians and the public and covering the selection and use of drugs is necessary. Analysis of drug selection, procurement process, distribution and presentation of products, and drug use should lead to reforms and cost savings. Improvements in drug selection and management could save up to 30% of present drug costs to the consumer.

5.7 Assistance in Exploring Possibilities for Private Sector Initiatives

Areas would include the following:

- Establishment of HMO's in AHAs
- Possibilities of expanded private health insurance involvement in the financing of medical services cost reimbursement.

5.8 Recommended Project

In conclusion, the authors recommend that a Financial Management and Medical Quality Assurance Project be designed and implemented by the GOL with assistance and support from the USAID. This project would assist in consolidating all

public sector medical cost reimbursement agencies into the NHSS. Technical assistance under such a project would be provided by a combination of long-term and short-term United States experts working cooperatively with local experts affiliated with the MOH, local universities, and what is currently the NSSF. The project would be designed and implemented in close cooperation with the existing USAID assisted project establishing a planning unit in the MOH.

LIST OF REFERENCES FOR STUDY

Several references were taken from the personal files of Lebanese health officials and consist of personal notes and memoranda, as well as formal documents. Unfortunately many of the references are undated and precise authorship could not be established. Copies of all documents listed below are on file at the USAID mission in Lebanon. The list of references presented below is in order in which documents were made available to and read by members of the team. Since authorship is not always known and documents are often undated, references are cited first by title (sometimes rather arbitrarily assigned by the authors as necessary), followed by authors, agency and date, if known.

1. General Information Concerning Lebanon Health Care Delivery System, (undated memorandum).
2. Number of Pharmacists, Pharmacies, Depots, Manufacturers, Drug Closets and Medical Laboratories in Lebanon, (undated memorandum), MOH.
3. The Health Care System of Lebanon: A Past, A Present and A Future, by His Excellency Dr. Adnan Mroueh, Minister of Health and Social Affairs, National Council on International Health, Washington D.C., December 1982.
4. Some Indicators and Statistics in Lebanon, (undated memorandum, referencing "World Bank Statistics - 1982").
5. Population and Family Planning in Lebanon: Problems, Perceptions, and Programs, by Samir Khalaf, AUB, May 1978.
6. Medical Care Utilization In the Village of Shinulan, by Nada Maroun, Hassan Ramadan, Antoine Salloum, Fayeck Shamma, Mona Shehab, and Roula Yasin, AUB Spring Semester, 1981/82.
7. Thoughts on Reorganization, MOH, November 1982.
8. Assessment of Rehabilitation Needs and Resources in Lebanon, by Joseph LaRocca & Sterling B. Brinkley, M.D., USAID, November 15, 1982.
9. Directorate for Area Health Systems, by Dr. Rachid Bashur, University of Michigan, January 28, 1983.
10. Report on a Visit to Lebanon, by Dr. D. Verdugo-Binimelis, WHO, November 1973.
11. Proposal to Tax Electricity Services to Finance Hospitalization for All the Lebanese, by Dr. Rida Wahid, NSSF, October 1980.
12. Lebanese Republic, Budget for Ministry of Public Health, 1981-1983, MOH translated in January 1983.
13. Hospital Statistics, Specialized Hospitals, 1979 and 1980, (undated memorandum).
14. Hospital Statistics, Medium Hospitals, 1978-1980, (undated memorandum).
15. Hospital Statistics, Large Hospitals, 1979-1980, (undated memorandum).
16. Urgent and Immediate Needs in the Health Services, (undated memorandum).
17. Hospitalization in Private Hospitals in Lebanon Financed by Ministry of Health, 1980, (undated memorandum prepared by Syndicate of Private Hospitals).
18. Employment Problems in Lebanon, National Office of Employment, January 1983.
19. Lebanese Health Sector Financing, Problems, Issues and Recommendations, by Dr. J. Jeffers, February 7, 1983, (Draft outline of study).
20. Health Assessment of Palestinian Refugees in Beirut and Southern Lebanon, by Bill G. Griggs, International Health Program Office, October 19, 1982.
21. Report on Foodborne and Waterborne Disease Surveillance in Lebanon, by Kamal T. Abou-Daoud, M.D., July 6, 1981.
22. The Lebanese Economy in 1981 - Middle East Economic Consultants, edited by Maroun Iskoubart and Elias Baroud, October 1982.

23. Anatomy of a Hospital in Distress, by Sameer I. Shehadi, M.D., Faculty of Medicine, AUB, reprinted from Bulletin of the American College of Surgeons, June 1977.
24. Hospital Statistics, Small Hospitals, 1979-1980, (undated memorandum).
25. Hospital System in Lebanon, (undated memorandum).
26. The Administrative Implications of the Agenda Papers on Health, by CDR Staff, March 1979.
27. Facts on NSSF, (undated memorandum).
28. Hospital Statistics, January 1980, (undated memorandum).
29. Report on the Activities of the Mobile Clinic, from Sept. - Dec. 1982, Red Cross of Lebanon, January 20, 1983.
30. Medical and Social Services, rendered by the Lebanese Red Cross during the Israeli War and the Seige of Beirut, Red Cross of Lebanon, August 6, 1983.
31. Health Situation in Lebanon, by Micheline Khalaf, CDR, (undated).
32. Drugs Statistical Studies, (undated MOH memorandum).
33. Hospital System in Lebanon, by Samira Janih, November 1982.
34. Distribution of Costs of Services and Maternity in the NSSF System, 1982, Adjusted to Reflect New Uniform Tariff, NSSF, February 1, 1983.
35. Statistical Realities of Medical Profession, National Office of Employment, February 1983, (in French).
36. Organogram of MOH, Republic of Lebanon, MOH, February 1983.
37. Foreign Economic Trends and Their Implications for the United States: Lebanon, American Embassy, August 1982.
38. The Upper Metn Health System, Project Proposal, submitted to USAID, October 1982, by AUB.
39. The Lebanese Economy in 1980, Middle East Consultants in Beirut, 1980.

ANNEX A: SCOPE OF WORK

A. Review available health financing information on the MOH, the NSSF, other ministries, the private sector, and third party insurers.
B. Collect additional information as necessary to prepare a description of how health care is financed in Lebanon, describing the problems and weaknesses with the financing mechanisms currently in use.
C. Propose alternative strategies and mechanisms for resolving these problems and produce a rational, cost effective financing plan compatible with the Lebanese context addressing:

1. Fiscal accountability
2. Training
3. Cost containment
4. Demand and supply factors
5. Allocation of GOL resources, cost analysis, financial planning and information system requirements.

D. Examine need for follow-on technical assistance and recommend candidates.
E. Prior to departure, prepare draft of findings and recommendations and present seminar on these results to selected MOH personnel.
F. Prepare and deliver final report to NE/TECH/HPN within two weeks of time of departure from Lebanon.

<u>Division of Tasks between Drs. Jeffers and Zukin</u>

A. Dr. Jeffers (Team Leader)
   1. Make contact with all government and private health sector agencies relevant to the study.
   2. Draft detailed outline of report.
   3. Assemble documents and reports needed for the study.
   4. Draft major sections of the report pertaining to general characteristics of health sector, description of health financing mechanisms, and weaknesses of the current financial mechanisms in use.
   5. With Dr. Zukin, draft sections of the report proposing alternative strategies for resolving financial problems as detailed in I.C. above and needs for technical assistance and possible candidates.
   6. Together with Dr. Zukin, present seminar on findings of the study including possible needs for follow-on technical assistance, to USAID/Lebanon and selected MOH personnel.
   7. Take responsibility for preparing final draft of report and submitting it to NE/TECH/HPN, within two weeks of team's departure from Lebanon.
   8. Coordinate with WHO, IBRD, and other international agencies in Lebanon as necessary for achieving the objectives of the study and assisting in drafting strengthening financing mechanisms and administrative reform, PID.

B. Dr. Zukin
   1. Follow-up on contacts with government and private health agencies relevant to the study, as necessary.
   2. Review and assist in revision of draft outline of the report and assemble additional data and information as necessary.
   3. Take major responsibility for assessing quality of health care provided, need for quality assurance programs, and drafting section of report dealing with these matters.

4. Take major responsibility for assessing financial implications of existing mechanisms for acquiring, registering, pricing and distributing pharmaceuticals as related to the study and drafting section of the report dealing with these matters.
5. With Dr. Jeffers, draft sections of the report proposing alternative strategies for resolving financial problems as detailed in I.C. above and needs for technical assistance and possible candidates.
6. Together with Dr. Jeffers, draft sections of the report proposing alternative strategies for resolving financial problems as detailed in I.C. above and needs for technical assistance and possible candidates.
7. Review final report and make final comments within two weeks after team's departure from Lebanon, prior to submission to NE/TECH/HPN.

ANNEX B: PERSONS CONTACTED*

Mr. Abiad, Director, Makassid Hospital
Mr. Abdel Loutfi Affiouni, Chief of Financial Department, Union of Civil Servants
Mr. Ajouz, V.P. Public Relations, MEA at the International Airport
Dr. Armenian, Dean, School of Public Health, AUB
Mrs. Claire Aweyjan, Director of Health, Insurance Plan, AUB
Mr. Abdallah Baltagi, Chief of Planning, Facility Design and Equipment Acquisition, Ministry of Health
Dr. Rachid Bashshur, Professor, School of Public Health, University of Michigan
Mr. Malcolm Butler, Director USAID Mission to Lebanon
Mrs. Letitia Bytler, Asst. Program Officer, USAID Mission to Lebanon
Mr. Chebara, Chief Pharmacist, MOH
Mr. Khattas Chebli, Director General, Ministry of Finance
Mr. Gaston Cordahi, Chief Actuary, National Social Security Fund
Mr. Claude Debs, Secretary, Syndicate of Private Hospitals
Hon. Robert Dillon, U.S. Ambassador to Republic of Lebanon
Mrs. Hayat El-Salh, Director of Health Department, Union of Civil Servants
Dr. Fadlallah, Chief of Union of Civil Servants
Dr. Antoine Farjallah, Director of Hospitals and Health Centers, MOH
Dr. Edgar Gedeon, Pathologist, Rizk Hospital
Dr. George Hakim, Director, Batroun Hospital
Mr. Ibrahim Hamdan, Director, Office of Public Relations, National Social Security System
Miss Nevine Hammud, MPH candidate, AUB
Mr. Jamil Hamra, American Life Insurance Company
Mr. Abbas Khalaf, V.P. of American Mutual Life Insurance Co. in Lebanon
Mr. Michel Khoury, Medical Director and Staff of Dahr-el-Bacheck, MOH Hospital
Mrs. Issa el Khoury, President of Lebanese Red Cross
Miss Claude Knesevitch, Economic Specialist, United States Embassy
Dr. Nabil Kronfol, Chairman of Deptartment of Health Sciences, AUB
Mrs. Kronfol, Vice President of the Lebanese Red Cross
Mrs. Kuttaneh, Member of Central Committee, Lebanese Red Cross
Mr. M. Kuzayli, Director, AUH
Captain Alexandre Matta, Military Health Corp, Lebanese Army
Mr. William McIntyre, Deputy Director, USAID Mission to Lebanon
Mr. Assad Mobarak, Director of Budgeting, MOH
Mr. Jean Mourad, Director General, National Employment Office
Dr. William Moussy, Medical Director and Staff Physician, Batroun Hospital
H.E. Dr. Adnan Mroueh, Minister of Health and Labor and Social Affairs
Dr. Nabil Nassar, Director, University Health Services
Dr. Raif Nassif, Professor, Faculty of Medicine, AUB
Mr. Natour, General Director of Electricite du Liban
Dr. Fawzi Odeimi, Director, Jounieh Hospital
Dr. Qomeir, Director of Medical Services, Lebanese Army
Mr. Shaik Mahdi Sadek, Director General, Office of Social Development
Dr. Robert Saidi, Director General, MOH
Mr. Sawi Salame, Director, Employment Services
Dr. Salah Sawaya, Director of Statistical Services, NSSF
Mr. Kurt Shafer, Program Officer, USAID Mission to Lebanon
Dr. George Tabbara, V.P., Order of Lebanese Physicians
Dr. Ridah Wahid, Director, National Social Security System
Dr. Fred H. Zebouni, Medical Director, Union of Civil Servants

*Colleagues who were members of the WHO/LRCS and World Bank mission are not included in this list.

ANNEX C
FEASIBILITY ASSESSMENT FOR A PREPAID HEALTH CARE PROGRAM *

Several phases are involved in the development of a prepaid health care program, each following on the successful completion of the previous phase.

1. Pre-Feasibility Study to establish potential interest.
2. Phase I - Feasibility study to determine:
   a. If all of the essential components of the proposed health program are present or can be assembled. Specifically we need to know: 1) whether a group practice can be established in this social milieu and situation and if not, whether some alternative arrangements can be made to provide physicians services without compromising the integrity of the system; 2) the level of expertise currently existing among management, paramedical and other personnel; and 3) the level of commitment existing or that can be generated to support the proposed program.
   b. A preliminary market survey in which the following are estimated:
      1) The population base potentially to be served including assessment of its health status and the scope and amount of health services or other activities required to meet health care needs, including specification of basic services to be provided.
      2) The design of an appropriate health care delivery system.
      3) The size of the membership (the population actually to be served) and the membership premiums that must be charged in order for the program to reach a breakeven point.
      4) The expected membership premium rates that can be levied or collected from the various possible sources of funding (e.g., the population itself, levels of government, outside aid, social insurance, etc.).
      5) Probable market penetration and under what circumstances (e.g., differing levels of cost vs. package of services).

Phase I consists of collecting and analyzing essential data and estimating the potential success of the proposed program. Its output would be a preliminary design of the health care delivery system, a schedule of benefits (scope of services) to be offered, a forecasted per person, a per family, per month cost and projected source(s) of funds to cover the forecasted cost, based on the estimated size of the population to be served as derived from the market survey. This phase typically requires about three months, including the services of an experienced HMO physician, a statistically-oriented specialist in medical economics and marketing, and a health facilities/health plan expert. Not all of these individuals would necessarily be required at site for the full three months, however.

3. Phase II

Presuming on the basis of Phase I study, the programs appears feasible; Phase II, the pre-implementation phase, would follow and would take an estimated four to six months to complete. In Phase II, the program components would be delineated, including:

a) The identification of an initial enrollment group, the development of an enrollment strategy and the initiation of an enrollment program.
b) The establishment of a medical group or other physician arrangement and the development of a time table for commencemewnt of operations.
c) The establishment of a financial group to bring together the required funds.
d) The identification of facilities to be used and establishment of a facilities and operations management group.
e) The development of an operational plan and a budget for the first twelve months of operations.

f) The development of management and support systems, such as accounting, management control, operating and reporting systems, medical records, etc.
g) The recruitment and selection of employees and establishment of training programs.
h) Coordination of the enrollment, medical, financial and management groups to assure commencement of operations on the target date.

4. Phase III - Implementation
5. Technical Personnel Required to Assess, Develop and Implement the Program:
   a) For feasibility study, a physician experience in prepaid group practice, a statistically-oriented, medical economist/market researcher, a health plan/facilities manager.
   b) For pre-implementation and implementation, a similarly qualified physician and health plan/facility expert.

* Prepared by Paul Zukin,M.D., M.P.H., 1977.

ANNEX D
Information Required for NHSS

A. Facilities
1. Name
2. Location
3. Owner
4. Services
5. Capacity
6. Classification
7. Classification Status
8. Authorized Charges for Services
9. Staffing
10. Utilization
11. Reimbursement

B. Patients
1. Name
2. Employment
3. Address
4. Relatives
5. Medical History
6. Diagnosis
7. Treatment
8. Medications
9. Charges
10. Eligibility for Reimbursement
11. Age (Date and place of birth)
12. Sex
13. Citizenship
14. Utilization
15. Reimbursement

C. Practitioners
1. Name
2. Address
3. Degree
4. License Status
5. Places of Practice
6. Specialization
7. Reimbursement

Annex E to the Report of the February 1983

WHO/LRCS Health Sector Assessment and Planning Mission to Lebanon

HOSPITALS IN LEBANON

1. The present status of hospital facilities in Lebanon

1.1 The existing Government hospitals

The Government hospitals provide for those who do not have the means to have private hospital treatment or who do not have the benefits of insurance. They, therefore, have the disadvantage of a stigma that has affected their degree of use and the services that they offer. Because of this and because of lack of confidence in hospital services, people make the effort to find the money to be treated privately if they can.

The Government of Lebanon also makes extensive reimbursements for private sector services to be provided to patients authorized to seek them by Government of Lebanon. (68% of total MOH budget in 1982).

Only 12 MOH Government hospitals are now operational, with an average of 47 beds each; some other smaller Government hospital properties exist, but are not operational.

Given the adverse circumstances, it is a tribute that the Government hospitals have been able to carry on both in and out patient treatment with little improvements during the war years and with out-dated and under-equipped buildings.

A number of the hospitals have a continuing history of care being given by religious orders, who have provided the order and management that due to the war has been difficult to implement from central sources. Control, supplies development and financing from central government have therefore been weak.

Eight of the twelve MOH Government hospitals were visited, although due to the constraints of time only brief impressions could be obtained. The AUB, however, carried out a more detailed survey of each hospital by students of the Faculty of Health Sciences in February 1983. They were able to provide statistics and data not previously available. A summary is contained in Annex Table E-1. There is a hospital for each Mohafazat (province) but only some hospitals for the Kada (areas).

One of the difficulties of the war years has been that accurate data on hospitals has not been available. A previous Ministry of Health figure was that the total capacity of Government hospitals was 1 543 beds. The figures now given by the AUB survey indicated an in use number of 573 with an extension capacity to 1 194. Current MOH estimates (February 1983) indicate 690 active public hospital beds, only 20 of them in Beirut.

The Government hospitals, although relatively few in number, are all under-utilized, and many have capacity for immediate expansion within the existing framework. A brief description of each hospital is in Annex Table E-2, although it has to be noted that to obtain a more detailed description takes considerably more time than was available.

1.2 Private hospitals

Annex Table E-6 lists private sector general hospitals, with the number of beds for each, by three major categories of general hospitals: university hospitals (total of 721 beds); hospitals belonging to religious communities and categorized as "non-profit" (1 777 beds); and "for profit" private hospitals (3 390 beds).

Members of the WHO/LRCS mission found that the few selected "private" hospitals which they visited (actually predominantly nonprofit hospitals belonging to religious groups; see Annex Table E-3 for examples) appeared to be well-run. No more general statement can be made regarding the operations or quality of care of the several categories of "private" hospitals, because few data are available and a considerable number of visits would be necessary. It appears that there is a considerable difference between some of these hospitals run by private doctors for profit and those run under either charitable status or a Board of Management of trustee status; those in the latter category include centres of excellence in which the effective major hospital work of the country is done, including medical training of doctors and nurses. It had been stated that many of the private hospitals are of poor quality and are only used because there is no better alternative.

The concept that health care is a commodity like any other has produced a proliferation of clinics of varying quality. They cannot offer the services of the major hospitals and are in themselves evidence of a system based on the profit motive that is not consistent with the real needs of the people.

Private hospitals aim to offer different grades of accommodation for in-patients, but the same degree of medical care. Patients can choose between grade 1, 2 and 3 accommodation at differing levels of cost.

1.3 Hospitals for long-term care

The Government does not own hospitals for the chronic sick but pays to bed.

Mental illness	4 institutions, totalling	1 305 beds
T.B.	3 institutions, totalling	235 beds
Chronic illness	10 institutions, totalling	1 695 beds
Rehabilitation	7 institutions, totalling	183 beds

1.4 Immediate plans for re-construction and development currently being undertaken in Government hospitals

Work is restricted to repairing and restoring damaged facilities. Due to the new situation produced by fighting in recent years, it has been undertaken by outside bodies, in co-operation with the Ministry of Health and under the direction of the Council for Development and Reconstruction (CDR). These comprise:

Fifty-two reconstruction projects being undertaken by CDR and administered by UNICEF, mainly as turn-key projects. They comprise health projects, drinking water, education and community self-help projects. Included (Health U36) is a temporary hospital at Saida, for which US1 1 million is allocated for construction. A note is added that equipment may be provided by the EEC. (EEC feasibility study to be carried out).

Contract for construction of 60 bed hospital in Hasbaya was due to be let in December 1981, to be financed by the EEC at a cost of approximately LL. 10 m.

1.5 Health care (MOH, ODS and some voluntary agencies supported by ODS)

The distinction between a small hospital and a large health centre is somewhat blurred. Nevertheless, a health centre now exists at Halba, which is to operate in conjunction with a hospital. A more typical health centre was

visited at Ghaziha, where it was apparent that the health centre building itself was not a significant factor in the operation of the centre. It was simply a collection of rooms, allocated for waiting, office, treatment, pharmacy, administration and two doctors/examination rooms. Two rooms were unused. Similar accommodation (approximately 250 square meters) could probably be made available in most places.

There are no real health centres except at Halba, which at present is not operational, being lacking in support. Throughout the country there are dispensaries which, with proper management, could be upgraded to small health centres.

2. Strategy as a framework for action

2.1 Hospitals are among the most complex and expensive of building types. The complexities of a modern hospital are under-estimated in Lebanon, due in part to the commercial approach to health care. These complexities must be understood and faced.

2.2 The first strategy is to make use of the existing beds that can be made available, doubling the total.

2.3 There should be an immediate temporary hospital to replace the one partially destroyed at Saida by act of war, because there are no government facilities to meet the need other than a small converted out-patient department. Building and commissioning permanent hospitals takes too long (2-3 years) to meet the need.

2.4 One new model hospital should be built to give visible evidence of what the state intends as its policy; this could possibly be the new permanent hospital at Saida.

2.5 Further state hospitals should be built over the next 20 years on the basis of "centres of excellence". (Note in this context that the conventional costs per bed now used can be unreliable as a guide and out of keeping with the concept of hospitals as places where active treatment is given as opposed to simply beds insufficiently supported by diagnosis, treatment and service departments).

2.6 In the interim period before the contruction of hospitals, the MOH should work in co-operation with some of the more suitable private hospitals, with the objective of combining with them under the direction of a National Health Authority.

2.7 Part of each annual budget should be allocated to upgrading the facilities of the existing under-equipped hospitals, which will then be seen to better.

2.8 Each hospital should have an individual development plan based on studies to be carried out which will determine the demographic need.

3. Recommendations on the immediate needs

3.1 Implementation of the temporary hospital at Saida and the UNICEF projects (Annex Table E-4).

3.2 Completion of partially completed or partially occupied hospitals, in parallel with solution to the problems of staffing, finance and management. (Orange Nassan, Dahr el Bacheq, Tyr, Tripoli, Karantina and Baabda).

3.3 Preparation of operational policies for each hospital, with the intent to underline the new health policy and its implementation.

3.4 Preparation and enforcement of maintenance and service procedures so that all the support functions of the hospitals work properly.

3.5 The system of payment for private hospitals needs to be improved (listed also under medium-term needs).

3.6 Preparation of development plans for hospitals.

3.7 Commencement of development plans for upgrading existing hospitals.

3.8 Establishment of Area Health Authorities, etc.

4. Recommendations on the medium-term needs (3 years)

4.1 Continuation of the procedures established under short-term needs, with development of existing institutions, rather than changing to new ones.

4.2 Possible construction of new hospitals at Qbayat and Nabatiye.

4.3 Possible commencement of a new Government teaching hospital and faculty of medicine, with training school for nurses and para-medicals, at a site to be determined, for the University of Lebanon, at say 300 to 500 beds, with 80-100 medical students per year (Omits need for overseas training).

4.4 Re-commencement of the uncompleted framework for 500 bed new hospital building at Baabda.

4.5 Implementation of proper demographic studies to determine the need, based on the new health policy, as opposed to the present hospital system for those unable to go to private hospitals. The demographic studies to be carried out by an independent source, to prevent mere codification of existing practices.

4.6 Implementation, at area level, of nurses and para-medical training schools at each area hospital.

4.7 Establishment of a plan and system for long-term development of hospitals.

4.8 Budgeting for increased running costs in addition to capital costs.

4.9 Due to high cost of hospitals, making primary health care the overall priority, on the basis that 90 to 95% of comprehensive medical care problems can be solved on an ambulatory basis.

5. Recommendations on long-term needs (beyond 3 years)

5.1 A model for the long-term system could be as Annex Table E-5. A functional programme is necessary for each project to specify the aims, scope and function to be achieved.

5.2 The pattern of hospital care will not remain static. In addition to sufficient provision for expansion of the various departments of hospitals, provision needs to be made for the setting up and development of research institutes or smaller scale research work at area hospitals.

5.3 Provision of fully equipped, purposefully designed health centres, with emphasis on preventative medicine, primary health care and post hospital and home care, to limit unnecessary growth in hospitals.

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GOVERNMENT HOSPITALS IN LEBANON
DATA SHEET, FEBRUARY 1983

NAME OF HOSPITAL	BEDS		PERSONNEL				ADMISSIONS	PT.DAYS	OPERATION	X- RAY EXAMS	OUT PATIE DEPT.O.P.
	operational	total	MD's (FTE)	Nurses	Aids	Techs					
TRIPOLI (QOBEH)	50	250	29	12	17	9	2885	11432	254	10071	12,321
(KARANTINA BEIRUT GOVERNMENT HOSPITAL	28	175	19	6	27	11	1131	4524	694	12969	16,096
TRIPOLI (ORANGE NASSAU)	40	80	8	5	25	4	3224	6682	0	0	4,551
JEZZINE GOVERNMENT HOSPITAL	0	25	4.5	3	5	3	1024	4096	12	0	7,210
BA'ABDA	60	157	16.7	10	40	8	2641	13384	787	10061	43,318
TYRE	60	80	20.5	7	8	5	3243	19458	1330	2530	28,383
SIDON	30	30	26	18	43	14	864 (3 mos.only)	3456	0	3424	4,407
MARJEYOUN	45	45	0	4	7	1	(last 2 mos) 80	1440	0	0	30,000
TIBNINE	35	35	16.5	13	29	5	3478	20868	1375	2998	26,590
DHAR EL BACHEQ	40	150		6	11	10	1456	9864	389	4432	13,699
BARTOUN	85	85	38	17	47	10	4,069	30,600	2383	13,370	11,735
BA'ALBECK	100	100	8	15	37	6	3472	13726	398	6290	12,071
TOTAL	573	1194	148.2	99	249	76	22384	108930	5239	52775	221,325

(Annex Table F-1)

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BATROUN HOSPITAL OUTLINE ASSESSMENT

No. of beds	85
Bed occupancy	65%
Site	Suitable
Overall planning	Adequate
Circulation	Adequate
Wards	Adequate: absence of back-up facilities.
Outpatients Diagnostic facilities Theatres Services departments Equipment	Not seen. Reported to have 4 X-ray personnel.
Capacity for expansion	Exists
Staffing	Well staffed
Maintenance	In need of re-decoration
General Comments	A smaller hospital purchased from the Maronite Society and leased to the Office of Social Security. Organization is under the control of an Autonomous Board. Charges are made for treatment in accordance with varying circumstances; possible to pay extra to have individual occupancy of a twin bedroom. Consequentially, the hospital is well utilised and reputed to be suitable to the people of Batrun. The revenue generated is re-invested in the hospital.
Proposal	The operational policy of the autonomous board should be studied in detail for possible use elsewhere.

TRIPOLI HOSPITAL (QOBEH) Outline Assessment

No. of Beds	50 beds operational
Occupancy site	less then 65% Maternity not functioning
Site	Suitable
Overall Planning	Basically functional
Circulation	" "
Wards (general)	Congested but adequate: absence of back-up facilities
Outpatients	2 Doctor's rooms. No treatment rooms
Diagnostic facilities	2 small floor mounted machines
Theatres	2, No recovery
Services Departments	Kitchen inadequate for 200 beds. Pharmacy only a small dispensary Laundry no separate foul wash CSSD missing: sterile supplies made up outside theatre
Equipment	Recently re-equipped by MOH from US
Capacity for Expansion	Space exists
Staffing	Inadequate Nusring and auxilliary staff
Maintenance	Decoration good, but inadequate maintenance staff. Incinerator out of order. Maintenance is unsatisfactory
	Re-opened in 1981, after closure during war
General comments	Requires adequate staffing to become fully operational. Administration is restricted to 1 small room only. No ambulances
Proposal	Can be expanded to detailed requirements after staffing is assured

ORANGE NASSAU TRIPOLI OUTLINE ASSESSMENT

No. of beds	80 (40 beds operational) Maternity, pediatrics and renal dialysis
Occupancy	High
Site	Suitable
Overall planning	Adequate
Wards	Suitable
Outpatients	Maternity clinic
Theatres	Delivery rooms only
Diagnostic	Portable X-ray machines but no technician
Services Departments	Laboratory suitable
Equipment	Good
Capacity for expansion	Exists
Staffing	Establishment 160, actual staff 50 - 60
Maintenance	Difficulties through shortage of staff
Renal Dialysis	A separate department, well set up for 8 beds (40 persons)
General Comments	A private hospital, donated by the Dutch Government to the people of Lebanon. Standard of facilities is high, but the hospital is underused through lack of staff, particularly for pediatrics. Facilities exist for barrier nursing and premature babies, although at the time of the visit there was 1 child and 1 premature baby
Proposal	With adequate staffing and operational policies, the hospital has the capacity for full utilization

KARANTINA (QUARANTAINE) HOSPITAL
OUTLINE ASSESSMENT

No. of beds	28 operational. 175 possible (general - not quarantine)
Occupancy	50%
Site	Suitable
Overall planning	Deficient
Circularion	Poor
Wards(general)	Congested but adequate: absence of back-up facilities
Outpatients	Simple Doctors' rooms
Diagnostic facilities	2 simple X-rays
Theatres	2 No recovery
Services department	Inadequate
Equipment	Under equipped
Capacity for expansion	Limited buildings feasible
Staffing	Inadequate nursing and auxilliary staff
Maintenance	Inadequate through shortage of staff
General comments	Expansion to upper floors and adjoining buildings was half completed in 1975 but has been left in that state, primarily due to lack of staff

DAHR EL BARCHQ (MT.LEBANON) OUTLINE ASSESSMENT

No. of beds	40 operational (150 nominal)
Occupancy	not known
Site	Magnificent mountain site, but difficult access
Overall planning	Basically functional
Capacity for expansion	Immediate up to 150 beds,but dependent on staff and equipment
Other factors	Not established
General Comments	An underused government hospital. One elderly patient reported to have been there for seven years
Proposal	If the need for expansion is not significant, due to difficult access, this hospital is ideally suited for supplementing the present facilities with specialised facilities for long term chronic illnesses.

TYRE HOSPTIAL. OUTLINE ASSESSMENT

No. of beds	56 (76 originally)
Occupancy	90%
Site	Congested
Overall planning	Deficient
Circulation	Adequate
Wards (general)	Congested : no bed services or back-up facilities, no maternity
Outpatients	Separate new building
Diagnostic facilities	1 old machine
Theatre	2
Services Departments	Reputed inadequate (not seen)
Equipment	Poor. No dental equipment, although 1 dentist employee.
Capacity for expansion	Difficult
Staffing	Inadequate. 15 nurses only
Maintenance	Poor
General Comments	The hospital has suffered through neglect during years of war and related understaffing. There is no alternative private hospital, except for maternity. It has survived against all odds through the war years
Proposal	The existing hospital can be converted to other uses. In the short term, the upper floor used for staff should be converted into patient bed rooms and the staff housed elsewhere

BA'ABDA HOSPITAL OUTLINE ASSESSMENT

No. of beds available	159 2000m^2
Occupancy	30 - 40%
Site	General Magnificent hill top site
Overall Planning	Deficient
Circulation	Inadequate
Wards	Congested but adequate: absence of back-up facilities
Outpatients	Difficult for access for large numbers
Diagnostic facilities	2 simple X-ray?
Theatres	2 ? No recovery
Services Departments	Deficient
Equipment	Under equipped (X-ray films developed manually) No incinerator
Capacity for expansion	See general observations
Staffing	Severe shortage of nursing and auxilliary staff (10 registered nurses 40 assistant nurses)
Maintenance	Inadequate through shortage of staff
Utilization	2461 admissions with 5 days stay
Records	A record system is just commencing
General Comments	The framework for a new 500 bed hospital already exists,; it would, however, be premature to complete it until staffing is assured. Can be completed in 2 years.
Proposal	Subject to general comments, the new hospital should be completed; the old hospital can be converted for nurses' training, teaching etc.

PRIVATE HOSPITALS

NOTRE DAME DE SECOURS. OUTLINE ASSESSMENT

NO. of beds	70
Occupancy	High
Site	Magnificent, but difficult access
Overall planning	Good
Circulation	Good
Wards	Good, with full back-up facilities
Outpatients	?
Diagnostic facilities	?
Theatres	2 ?
Services Departments	Adequate
Equipment	Good
Staffing	Good
Maintenance	Excellent
Capacity of Expansion	Intent to expand to 120 beds
General Comments	A private Maronite hospital, well organized with immediate attraction to patient and visitor. Payment is generally insurance based. 7 beds are available for government patients, for whom the bill is passed to the Government. Grades of ward accommodation are 1,2 + 3, but all are good and receive the same care.
Proposal	The planning and arrangement is a model of what can be the objective for similar sized public hospitals.

. PRIVATE HOSPITALS

MAKASSET HOSPITAL OUTLINE ASSESSMENT

No. of beds	200 with intent to extend to 300
Occupancy	90%
Site	Congested historic urban
Overall planning	adapted historic, but working
Wards	vary according to grade, but all good with bedhead and back-up facilities
Circulation	depends on use of two lifts in high rise urban situation
Outpatients	?
Diagnostic facilities	6 X ~~vary~~ rooms, with intent to extend
Theatre	Fully equipped theatre suites
Services Departments	Require expansion to meet increasing bed numbers
Equipment	Good
Staffing	Good, benefiting from the hospitals' own School of Nursing
Maintenance	Good
Capacity of Expansion	A site is reserved for long term expansion
General Comments	The Makasset Hospital is the principal Muslim Hospital of Beirut. It is immediately apparent that it is well run and administered. Besides endorsed finances not available to Government Hospitals, it charges according to the grade of accommodation, with payment principally being insurance based.
Proposal	There is no cause for the Ministry of Health to seek to compete with hospitals of this status, but rather to work in conjunction with them

COMPARISON OF ADVANTAGES FOR SAIDA TEMPORARY HOSPITALS

1.

Advantages - Porta-Kamp, Texas

- Established pre fabricated system
- Low F.O.B. cost, Houston 1 = $1,362,973 at LL 3.88=1= LL 5,288,335
- 3876m^2 of accommodation offered, with part of equipment

1. Advantages - Norconsult, Norway

- Quick delivery + erection
- Low cost - approx. LL 1690m^2 excl. equipment
- Erected cost (alternative III LL 6,487,000)
- Suitable hospital layouts, capable of being modified as required to meet local needs
- Can be adapted for other purpose later, for semi-permanent uses
- Compact planning and single storey and area of 5 buildings -5 x 768 = 3840 m^2

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2. Disadvantages- Porta Kamp, Texas

- No plan adapted to site
- Erection and ground slab and services in slabs excluded
- F.O.B.cost likely to be very misleading for final cost factor of x 2 to x 3?
- Ward planning is dormitary not hospital 4 beds max. 11 x 4 +1x2= 46 beds, not 77
- Structural division in wards and other rooms impedes use of space
- Absence of back up rooms in wards
- Kitchen small for patients' meals and staff

2. Disadvantages - Norconsult, Norway

- single storey layout uses more site area
- Quality of finished materials requires checking
- Some planning errors (capable of correction)
- Equipment not included

- Laundry domestic rather than hospital

- Specialized rooms adapted to meet the system rather than the needs

- Insufficient evidence of design to meet hospital needs

- Evidence of sale of a standard product, as a temporary building for any purpose. Fluctuation contract.

Proposal by Norconsult for 130 bed temporary hospital in Saida

There are a wide range of temporary hospital building available, most of which include design costs within the overall cost overheads. With any temporary proposals, the main questions to be examined are :

1. Will the temporary buildings occupy land that will prejudice the development of the final building?

2. What will be the longer term use for either the temporary buildings or the site ?

3. Are the proposals suitable for to meet the temporary needs?

The first two questions are related to the need to prepare an overall Development Plan for the Hospital Site, stating the broad outlines of policy and programme, which should be undertaken urgently. The importance of this cannot be overstated. There exist many examples of so called temporary buildings,occupying the best pieces and lack of properly designed facilities.

A properly equipped permanent hospital is an expensive investment both in initial and running costs. As a general principle, city type high rise buildings should be avoided for this reason. Up to four floors high is the optimum, with good horizontal communications between the parts achieved by hospital streets. The relevance of this to Saida is that the permanent hospital should be on a site that has this planning concept, with the attendant benefit of expansion of any of the parts.

The temporary hospital plan offered is described as being the plan shown as the Norconsult leaflet, but constructed with local materials with pitched roofs rather than the curved roof pre-fabricated system illustrated. Success obviously depends on the ability to apply the system to local building; the difference in time between this and erected imported pre-fabricated components need not be significant.

The plan demonstrated on the leaflet comprises five blocks, each 32 m x 24 m, based on an 8 m square grid. There are two blocks of wards, two of mixed uses and one for the service ancillaries.

The ward plans are open planned in units of 6 beds, with options to subdivide into 3 beds, or cots, as required. A disadvantage is that it is necessary to go through each 6 bed ward to get to the end one, which reduces flexibility between male and female wards.

One block usefully combines maternity, operating theatres and sterile supplies, although a weakness of the system is that it is necessary to go past the sterilization rooms to get to the operating theatre suite and through the scrubs up area to get to the Doctor's rest room. This is a problem encountered in using simple building uses but in terms of temporary buildings it still compares favourably in provision with many existing buildings.

The main entrance relates to outpatients and Administration and is curiously isolated from the other blocks. In other words, the connecting communications spine corridor has off it in patient entry, accident and emergency entry and supplies entry, but the administration and outpatients' department is sealed off by the X ray and the emergency rooms.

A first conclusion is that the 130 bed hospital is offered as a type example and is expected to be amended in detail to suit individual needs, within the general terms of the system, in addition, therefore, to the communications omission in the administration and out patient block, it is recommended that the rooms offered are individually examined against what is seems to be the need for the area if the other is likely to be accepted. A list of some such questions is appended.

(Norconsult. 130 bed Hospital)

Legend No.	Appendix Some questions on the facilities offered
3.	Are isolation beds suitable as such at the end of the wards? or are they just single bed wards?
4.	How many children ? How many cots? Can they be separate?
11.	How many examination rooms ? What about treatment rooms?
12.	Is access to assisted bath wide enough ?
13-15	Is the administration suitable?
25	What is the need for Doctor's viewing to the X-ray room ?
28	Is the one X-ray room set up for barium ?
5 and 39	Is the separation of utility and lay up room desirable?
30	Will the doctors use one large room ?
43	Should the delivery room be subdivided to two separate rooms?
	When do the mothers go after delivery?

The above questions are representative of items that may be usefully discussed with Norconsult if the offer for the temporary hospital is accepted.

A Development Plan for Hospitals in the long-term

The long - term proposals are to develop each Area, which will have within it its own system of hospitals and health centres. The chain of referral would be :

Health Centre for Primary Health Care, serving 20,000 to 30,000 persons.
Rural Hospitals, say with 120 beds- serving approximately 100,000 persons.
Area General Hospital 120 - 300 beds- serving approximately 200,000 - 300,000 persons.
Specialist care, not available with the area, would be referred to a National Hospital, e.g. Children, Opthalmic, Psychiatric.

1. Implications of the Plan.

1.1. This proposal transfers existing dispensaries, which would become included in Health Centres. Central Hospitals would become Area Training Centres for Doctor in practical clinical experience, Nurses, para medical workers technicians. They would also include rehabilitation and research facilities.

1.2. The technical support system for the system requires to be set up and developed. Before each hospital becomes operational it is necessary to have trained personnel at each level, requiring a National training progamme and organization,
e.g. the chain of responsibility in maintenance is :
Technicians and Maintenance operatives.
Hospital Wards officer
Area Chief Engineer

1.3. The Supplies system requires to be developed as above. There already exists a Decree for a National Office for Drugs for the procurement, storage and distribution of essential drugs, which can be implemented within the system. Central distribution allows one factory type laundry to be set up for the whole area, instead of numerous small laundries. It does not have to be directly connected to the main hospital buildings.

1.4. Costs of the System. Capital costs of each area general hospital, if implemented on the basis of places of active treatment, as opposed to beds, will be expensive. Running costs and the revenue consequences, must also be planned at the time of initiation of each hospital, e.g. a Hospital costing LL 150 million will cost LL 40-50 million each year to run.

2. The predominance of the private sector has caused public hospital outpatient facilities to be underdeveloped, to consist simply of a small number of doctors' rooms, with clinics by some specialists at various times during the week. The concept of builiding up numbers on the basis of 'Doctor Sessions' of, say, 18 per week at about 20 persons per session, does not yet exist on the basis of a population catchment area, or a referral system from the Primary Health Care System.

Basis for an Area Hospital Outpatients' Department.

3.1. <u>Consulting Facilities</u>.

Consulting Room with 1 or 2 examination room- number dependent as number of Doctor sessions; to include clinics for casualties, orthopaedic fracture, maternity/Gynaecology, physiotherapy, dental, paediatric,psychiatric, opthalmic, urology, ENT..
Utility Room - clean

Utility Room - dirty

Test Room

Auxilliary : reception, waiting, stores, lavatories, etc.

3.2. Outpatient Operating Suite, with anaesthetic, scrub-up, sterile supply room, sisters' office, staff room.

3.3. X-ray room with pocessing , viewing, waiting and changing.

GENERAL HOSPITALS IN THE PRIVATE SECTOR

Universities	Beds
1. American Hospital - University of Beirut	421
2. Hôtel Dieu	300
	721
Hospitals belonging to communities categorized as "nonprofit	
3. Hôpital St. Georges, Beyrouth	274
4. Makassed, Beyrouth	240
5. Libanais - Jehtaoui	125
6. Sacré Coeur, Hazmieh	150 (.)
7. St. Charles, Hazmieh	120 (.)
8. St. Joseph, Dora	140 (.)
9. Islamique, Tripoli	160
10. Behannés (médecine & chirurgie)	125 (xx)
11. Zahraa, Ouzaï	118
12. Azounieh (médecine & chirurgie)	100 (xx)
13. Tell. Chiha, Zahlé	100
14. Saydé - Ferzol	35
15. Deir Kamar (médecine & chirurgie)	30 (xx)
16. Hemline (médecine & chirurgie)	20 (xx)
	1 777
16 hospitals	2 498 beds

) The number was estimated by the Hospital Syndicate, because of lack information.

These hospitals have a number of beds assigned to medicine and surgery as "general hospitals" but also have some beds, which are not included in this list, for mental, paralytical and pulmonary patients.

"FOR PROFIT" PRIVATE HOSPITALS

Beirut	Beds	Mount Lebanon	Beds	South	Beds
1. Barbir	120	Sahel, Gholini	150	Hammoud, Saida	162
2. Rizk	80	N.D. Liban, Jounieh	120	Cheheib, Saida	150
3. Najjar	70	St. Martin, Jbeil	75	Jebel Amd, Tyr	92
4. Attebbaa	40	A. Jaoudé, Jell.Dib	74	Labib, Saida	75
5. Tork	40	St. Louis, Jounieh	63	Alaa-Dine, Sarafand	64
6. Hayek	60	Jbeil	55	Dalaa, Saida	50
7. Khalifé	22	Arz, Zalka	54	Elias Elias Saida	42
8. Trad	30	Samir Serhal, Rabwé	50	Nakeel, Saida	36
9. Baydoun	23	St. Georges, Hadath	35	Assaf (St.Antoine)	23
10. Adnan Haydar	23	St. Thérèse, Hadath	50	Osseirane, Saida	20
11. Moarbes	30	M. Mikhail, Amchit	34	Ghandour, Nabatieh	18
12. Bekhazi	20	Hajj, Achkout	30	Maamari, Saida	17
13. Elie Karam	20	N.O. Deliviana, Bekfaya	54	Chaaban, Nabatieh	35
14. Akhaa	16	Chehim Chouf	13	Hajj, Saida	15
15. Bittar	32	Iman, Aley	60	Chabb	15
16. St. Jean	15	Baakline	40		
	641		957		824

+ Eye Hospital of Dr. Charaf U. Dine, Aley 20

North

1.	Mazloun, Tripoli	90
2.	Accar, Halba	60
3.	Razi, Halba	55
4	Mounla, Tripoli	52
5.	Borji, Amioun	30
6.	Hosseini, Tripoli	45
7.	Chahine Chahine, Tripoli	30
8.	Mar Mansour, Hasroun	30
9.	Chahal, Tripoli	26
10.	Halim Chahine, Amioun	20
11.	Rahbane, Zghorta	34
12.	Bissar, Tripoli	30
13.	Tripoli, Koura	42
14.	Batroun, Batroun	80
		624

Bekaa

1.	Ibn Sina, Baalbeck	45
2.	Ahli, Baalbeck	80
3.	Khalil, Zahleh	32
4.	U. Miss, Chtoura	50
5.	Tell, Chiha, Zahlé	100
6.	Saydé - Ferzol	35
		324

1. This information is based on statements made by hospitals that have paid their dues to the Hospital Syndicate, and they have not been verified. We have added to this list those other hospitals of which we know, even if they have not paid their dues to the Syndicate.

2. Some other new hospitals are being established. We know of one in Ajaltoun of approximately 150 beds, belonging to a religious community of nuns. Five other hospitals are being installed in Saida and in the South, with a total of 400 to 500 beds.

3. The above statistics are therefore approximate and subject to caution. As soon as security will permit, we will undertake a precise inventory.

Annex F to the Report of the February 1983

WHO/LRCS Health Sector Assessment and Planning Mission to Lebanon

HEALTH MANPOWER AND TRAINING IN LEBANON

1. Assessment of the current status of Lebanese Health Manpower and Training

1.1 Health manpower

In the past there was no clearly defined national health policy for Lebanon. This situation has further been encouraged by the war over the past eight years. As a result no comprehensive plan exists for health manpower development.

The information base required for adequate planning is lacking, and the data available are deficient. Recently the Minister of Health appointed several task forces to study various aspects of the health system. The data given below were obtained from the reports of these task forces, as well as during visits to health agencies.

In 1980 there were 2 404 practising physicians in the country, out of a total number of 3 383 registered physicians. Of the remaining registered physicians, 252 were known to be residing permanently overseas and 727 could not be traced to their known addresses. It was suggested that a number of the latter group were living temporarily outside Lebanon.

Considering the estimated population of Lebanon (3 000 000), the number of practising physicians provides for a reasonable physician: population ratio (1 : 1 248) compared to other neighbouring and developing countries. However, the health care services are characterized by maldistribution of physicians, as can be seen from Table F-1. The majority of physicians work in the private sector, and of those who work with the Ministry of Health the majority do so on a part-time basis (Table F-2). A large proportion of practising physicians (58%) are specialists.

About 52% of all physicians registered between 1930-1980 graduated from medical schools outside Lebanon. In recent years there has been a steady increase in the number of registered physicians graduating overseas, with a peak of 76% in 1979-80. Table F-3 shows the origins of the diplomas of 852 Lebanese physicians registered by the MOH during 1971-1977. The licensing procedure demands that all Lebanese graduates, whether they studied in Lebanon or overseas, should apply for and pass an examination (colloquium) before they are licensed to practice and are registered. The examination is organized by the Ministry of Health.

By contrast to physicians, there is marked shortage of nurses and other allied health personnel, especially at the middle levels (Table F-2).

The distribution of health manpower in the public and private sectors illustrates the major role which the latter plays in the health care system of Lebanon.

1.2 Health personnel training institutions

The main health personnel training institutions in Lebanon are shown in table 5.

There are two well established medical schools, one at the American University of Beirut (AUB) and the other at St. Joseph University. Both are private institutions more than a century old. At present AUB admits about 86 medical

students per year and the St. Joseph University admits 110. The mission was informed that two new private medical schools, recently started and not officially recognized, are now training students in the premedical stage. With the establishment of these new medical schools and the return of increasing numbers of Lebanese medical graduates from abroad, the numbers of physicians would exceed the health needs of Lebanon and create serious problems. Medical education is expensive, and the need for its expansion should be carefully studied on the basis of the country's health development plan.

There are ten nursing schools, of which three (AUB, St. Joseph University, and Lebanese University) offer training at the Bachelor Degree level. The rest train nurses to the technical baccalaureate level. The AUB Faculty of Nursing also offers an Associate Degree in nursing (2 years) which does not fit with the Lebanese legislation which stipulates that only two types of nurses are recognized, BS and Technical Baccalaureate. In 1981 the total numbers of graduates from all nursing programmes was 285. It is important to note that all the nursing schools except for two are located in Beirut and belong to the private sector. There is difficulty in attracting sufficient numbers of students to study nursing. Apart from the unattractive conditions of service, the location of most nursing schools in Beirut seems to be responsible for this situation, since families in rural areas are reluctant to allow their daughters to come and live in Beirut. In planning any new nursing schools, it is important, therefore, that these should be established in the Mohafazat outside Beirut so that students would be living in or within easy reach of their communities.

The category of nusing aid is found in hospitals and health centres all over the country. There is no specific educational requirement for their recruitment and they are attached to hospitals for in-service training.

There is one school for training sanitarians in the country. The training is conventional and the graduates' role is limited to inspection of housing, food stores and restaurants and to enforcement of legislation.

Plans for training village health workers on an experimental basis in Saida have not been implemented. There are now efforts by voluntary organizations to initiate in collaboration with the Ministry of Health some projects for training of village health workers.

The Faculty of Health Sciences of the American University of Beirut provides training at the Bachelor Degree level (B.S.) in environmental health, biostatistics, and medical laboratory technology. The curriculum of the B.S. programme is under review and it is planned to provide for a core course during the first 1 1/2 years of the programme to be followed by 1 1/2 years in the specific field of study. Consideration is also being given to the introduction of two new programmes, one in health education and the other in administration. The Faculty of Health Sciences also offers training at the Masters level in epidemiology and in general public health, as well as in health and hospital administration. The Master in Public Health can be taken with emphasis on hospital administration and for physicians with experience takes nine months. It is interesting to note that the Ministry of Health has so far not taken advantage of these training facilities for training its staff.

2. Outline of problems

The following are significant problems observed by the mission. Many of these are already identified by the Government and have been reflected in recent statements of the Minister of Health and in reports of various task forces.

2.1 In the absence of a clearly formulated national health policy, no health manpower plans have been developed.

2.2 Lack of basic health information poses a serious constraint in identifying health problems objectively and in setting priorities for planning purposes. Data on various categories of manpower and on their numbers and distribution are incomplete, sometimes fragmentary and not collated. The lack of accurate and reliable information jeopardizes the efforts to formulate, implement and evaluate of health and manpower plans. However, until an

effective health information system is developed, the basic information currently available (if properly compiled and used) could justify some immediate action on priority problems that need urgent attention.

2.3 The health delivery system is fragmented in a multiplicity of both public and private agencies which are not yet effectively coordinated. This constitutes a serious constraint in planning comprehensively for the health sector. Many of the agencies are competing for the same human resources. Each agency operates independently to generate its own resources in an effort to become self-contained. The salary structure within the public sector is far less attractive than in the private sector and this has led to an "internal drain" of available manpower into the private sector which dominates the health services delivery system. It is paradoxical that, while the Government spends a great amount of money (LL. 150-180 000 000 of MOH funds alone in 1982) contracting the private sector for curative care of the citizens, its own conditions of service remain unattractive. This is a major constraint in securing the services of sufficient numbers of staff in the public sector.

2.4 Although there is no shortage of physicians, there is a marked shortage of paramedical health personnel, especially at the middle level. Furthermore, the existing health manpower (and especially physicians) are poorly distributed, with excessive concentration in urban settings and particularly in Beirut, which has 52.6% of the total number of physicians.

2.5 There has been a steady increase in the number of Lebanese physicians graduating abroad, and in recent years they constituted 52% of registered physicians. These physicians are not well oriented to the health problems of the country and the health system. The training programmes of physicians andother health personnel studying in Lebanon are predominantly oriented to curative hospital based medical care rather than to comprehensive health care. There have been some efforts by the Faculty of Health Sciences of the American University of Beirut to organize field training of its students in

the community in collaboration with the Ministry of Health and other health agencies. However, due to the war it was not possible to implement this programme.

6. There is a strong need to improve the managerial capacity of the health system, including management of the health planning process and the management of implementation.

7. The establishment of health personnel training institutions is apparently not effectively controlled or coordinated.

Comments on the new health policy

The policy statement is a major step forward since, when finally endorsed, it provides the basis for a national health plan.

The new policy states that health is a constitutional right of the citizens and that the State is committed to provide personal and non personal, curative and preventive, promotive and rehabilitative health services to the people. In the Lebanese context implementation of this policy requires close consultation, involvement and commitment of the various health agencies, including the private sector which dominates the health system at present. It is not clear how far the agencies have been involved and the degree of their commitment.

There seems to be political support for the policy. However, sustained efforts need to be exerted to enlist the cooperation and participation of all concerned parties including representatives of health care agencies, health occupations, training institutions, and consumers for purposes of realistic planning and effective management of plan implementation. By seeking this kind of involved participation throughout levels of decision making and all levels of operation, it could be possible to link up the political and technical processes related to the management of the health services. A mechanism needs to be established for this purpose.The proposed

decentralization with Regional autonomy in the delivery of health services seems to be a good approach to increase health care coverage and improve the quality of health services. There are, however, several issues which need to be carefully considered and resolved. These include:

(i) The managerial skill required both at the central and regional levels for planning and operation of the system.

(ii) Integration of the health agencies within the public sector and coordination between the public and private sectors.

(iii) The present shortage of health manpower in the public sector.

(iv) The possible resistance of health professional or political groups to the proposed system.

(v) The mis-match between the training of health personnel at present and the tasks they are expected to perform in the new system.

(vi) The cost of operating effectively the Area Health System throughout the country.

The Upper-Metn proposal for delivery of comprehensive services seems a reasonable model to adopt in the implementation of regionalized health services. The proposal was carefully planned on the initiative of the community, and its implementation will be based on partnership between the private sector, the Ministry of Health, the local Government authorities (Council of municipalities), a teaching institution (AUB Faculty of Health Sciences), and the community. No doubt this model will need modification according to the needs of the community to be served, the health agencies operating in the area, available resources, etc.

Therefore, although the policy for decentralization with establishment of Area Health Systems has been endorsed, and rightly so, it would be wise to effect implementation of the plan in stages in order to learn from the experience as the system spreads an be able to identify constraints andovercome them. This is particularly important since it would take some time before the managerial capacity of the system is strengthened and the required number of health personnel, especially at the middle level, are trained in order to overcome the present shortage.

4. Recommendations

The action proposed in these recommendations is composed of two complementary and partially overlapping phases, an initial phase (up to 12 months), leading to a second phase (1983-1985) for a long-term health manpower development plan

4.1 Phase 1 (up to 12 months)

Some of the health manpower problems discussed earlier are obvious and could be alleviated by decisions which permit the necessary and appropriate action to be taken.

4.1.1 Improvement of the managerial capacity of the Ministry of Health

This can be done through organizing workshops on the managerial processes for national health development. The training should include participants from the central level of the Ministry of Health as well as from the provinces. It is also highly desirable to involve participants from other health agencies in the public sector. The workshops should be followed by formulation of the detailed health plan and the programme for its implementation.

4.1.2 Revision of Salary and Work Conditions for physicians and other health personnel in the Public Sector to secure their full-time services and improve the coverage and quality of care.

One alternative would be to pay them 200-300% of the salary as an allowance in lieu of private practice. Such a scheme operates in several countries, e.g., Jordan and Iraq. Another alternative would be to recruit them on the basis of a salary plus a fee for service with a maximum limit to income and with admission privileges only at the hospital where they are employed. Other incentives such ashousing and transport can also be considered for those who work in rural areas. As far as possible, personnel should be recruited to serve in or within easy reach of their communities. A decision on this matter is urgently needed since the success of the new policy for decentralization and upgrading of the services would depend on it.

4.1.3 Expand training of middle-level health personnel through the establishment and development of Health Training Institutes, initially one in each province and eventually in every Area Health System; for training of nurses, nurse-midwives, laboratory technicians, X-ray technicians, sanitarians, etc., according to the needs of the health services.

The shortage in these categories of workers is obvious and a decision on the establishment of training institutes needs to be taken soon. The proposed institutes should be affiliated to hospitals and other health care facilities in the province for purposes of practical and field training. Such arrangements are necessary to provide the service component of training and at the same time should help to upgrade these services. The entry requirements would be 9 - 10 years of general education, and the training would be for 3 years, leading to the Technical Baccalaureate.

It would not be possible to embark on the establishment of all the institutes at one time owing to the magnitude of the resources that would be required. Therefore, they should be phased. If this recommendation is accepted, the Government needs to take a decision soon on the number and site of the proposed institutes, based on the resources that can be made available.

The Faculty of Health Sciences at AUB can play a leading role in the development of these institutes, in the light of the faculty members' experience in the establishment of the College of Health Sciences in Bahrain. The collaboration of WHO and/or other agencies may be sought in the training of teachers, development of curricula, and provision of teaching aids in the initial stages. Once a decision is made, it will take at least 2-3 years to plan and prepare for starting the training programmes.

4.1.4 Orientation training for all manpower currently in the service and to be recruited on the health problems of the country and on the organization and operation of the health system. Such training could be undertaken through collaboration of staff in the Faculty of Health Sciences of AUB and in the Ministry of Health. The main areas to be covered would be disease patterns and the organization, operating policies, and problems of the health systems.

4.1.5 It is also recommended that the existing legislation whereby new graduates are required to serve in a rural area for two years before being allowed to practice in a city be implemented.

4.1.6 In the meantime increasing emphasis should be given to the teaching of community medicine for all health personnel and training in Family Practice (which is offered as a specialty at the AUB) should be encouraged.

4.1.7 Studying the needs of various categories of health personnel for continuing education and developing a plan for a national system for continuing education.

4.1.8 Utilization of available WHO fellowships for training Ministry of Health staff at the Faculty of Health Sciences of AUB in shortage specialties such as epidemiology, biostatistics, and health services and hospital administration. WHO "internal" fellowships can be utilized more effectively in the development of the manpower needed for the operation of the health services.

4.1.9 Undertaking a detailed manpower study within the framework of a national health information system. The study would focus on the demographic, academic and manpower characteristics of the health occupations in the country as a basis for the organization of a professional registry in the Ministry of Health. This registry will serve the purposes of health manpower planning and of personnel administration and management. A personnel register will also provide the basis for job description and classification which is essential for task-oriented education.

4.1.10 Conducting a survey of health personnel training programmes, including their types, locations, numbers of students, institutional affiliations, categories trained, duration of training, graduates, staffing, etc.

4.1.11 Establishment of minimum requirements and necessary legislation for the establishment of new Faculties of Medicine. A decision is needed in this matter in the light of the recent establishment of new medical schools. The requirements will include pre-requisites such as need for more physicians, philosophy and objectives of the school and its justification, as well as physical facilities, size of enrolment, staff/student raio, availability of health care facilities for clinical and community training, affiliation to a university, etc. At present there does not seem to be a need for a new medical school, taking into consideration the current intake at AUB and St. Joseph Univerisities, the increasing number of graduates from foreign Universities, and the rate of population growth. There may be some justification for the State to have its own medical school, proposed to be in the Lebanese University since there is none at the moment. However, such a decision should be based on the results of the detailed manpower study recommended above. If on the basis of the study it is decided to start a national school, then every effort should be made to bring the two newly established private medical schools under the umbrella of the Lebanese University and pool their resources together with those of the Government to establish the national school.

4.2 Phase 2 (1983-1985)

4.2.1 Definition of the role and tasks of each category of health workers, based on identified priority health problems, service targets, and the type and amount of activities to be carried out.

4.2.2 Reexamining projections of manpower requirements to bring them more closely in line with the needs of the Area Health Systems and the training capacity of the country.

4.2.3 Evaluation of the curricula of health personnel training programmes, as a basis for reorientation of the education of health workers to meet the objectives of the health system.

4.2.4 Organization within the Ministry of Health of a health manpower unit which possesses or can call upon planning and programming skills. This unit could be part of, or work closely with, the health information systems that will be developed. The unit will be responsible for planning, implementation, monitoring, and evaluation of the health manpower development programme.

4.2.5 Creation of a General Medical Council which would be responsible for recognition of degrees, licensing examinations, licensing, and registration of health professionals, monitoring the quality of care, and application of the medical code of ethics. The Council would also determine the number of students that are required to study medicine or any other health profession, whether within Lebanon or abroad, and lay down the criteria and procedures for their selection. The Council would be under the Chairmanship of the Minister of Health and have as members:

- The Deans of Medical and other health Professions Schools
- Representatives of the Ministry of Education
- The Director-General of Health
- Representatives of Professional Associations (Orders)

The Council would function through various appointed committees (curricula, examinations, licensing and registration, ethics, etc.).

4.2.6 Training of some physicians through sponsorship of the Ministry of Health in medical schools in Lebanon. The candidates for such sponsorship should be selected from communities where there is shortage of physicians, and they should be committed, through a financial bond, to serve in their community for a minimum period of say 5 years.

4.2.7 Develop and implement the continuing education programmes planned in Phase 1.

TABLE F-1

DISTRIBUTION OF PHYSICIANS BY MOHAFAZATS (1980)

AREA / DISTRIBUTION OF PHYSICIANS	BEIRUT	MOUNT LEBANON	NORTH LEBANON	BEKAA	SOUTH LEBANON	TOTAL
POPULATION	664 000	1 046 000	458 000	255 000	314 000	2 737 000
NO. OF PHYSICIANS	1 264	580	233	159	168	2 404
PERCENTAGE OF THE TOTAL NO. OF PHYSICIANS	52.6	24.1	9.7	6.6	7.0	100
PHYSICIAN POPULATION RATIO	1:525	1:1803	1:1965	1:1603	1:1869	1:1138

TABLE F-2

PHYSICIANS ON CONTRACT WITH MINISTRY OF HEALTH, LEBANON.
(As of February 1, 1983)

Full-time	120
Office hours	29
For 36 hours/week	38
For 30 hours/week	14
For 18 hours/week	37
For 9 hours/week	35
Total	273

TABLE F-3

Origins of diplomas among 852 Lebanese physicians registered by the MOH during 1971-77*

Universities in Lebanon: 320

St. Joseph University: 225

American University of Beirut: 95

Universities outside of Lebanon 532

225 in French (France: 206**
Belgium: 13
Algeria: 6)

93 in English (Egypt: 90; Australia: 1;
India: 1, Iraq:1)

214 in other languages
(USSR: 99; East Germ: 26;
Spain: 26; Syria:23: CSSR: 14;
Bulgaria: 7; Rumania: 5;
Italy: 3; Austria: 2;
Greece: 2; Turkey: 2;
Albania, Argentina, Hungary,
Poland, Yugoslavia: 1 each

* Source: Three Year Report of St. Joseph University, published in L'Orient-Le Jour, Beirut

** France has now limited the admission of foreigners to 5%, which will increase the number of Lebanese physicians taking their degrees in various other countries in different languages and cultures.

TABLE F-4

HEALTH PERSONNEL IN LEBANON - 1977

	Number	Ratio of health workers to general population
Doctors	2 000	1/1 080
Dentists	932	1/3 480
Pharmacists	894	1/3 635
Nurses	1 514	1/1 625
Nursing Aids	998	1/3 256
Midwives	500	1/6 500
Physiotherapists	96	1/33 854
Laboratory technicians	200	1/16 250
X-Ray technicians	20	1/162 500
Sanitarians	200	1/16 250

Source: Ministry of Health, October 1977

TABLE F-5

HEALTH PERSONNEL TRAINING INSTITUTIONS

School	Programme	Entry Requirement	Duration	No. of Graduates (1981)	Remarks
A. MEDICINE					
1. AUB Faculty of Medicine	M.D.	2nd part Bacc. 3 years B.S.	4 yrs + 1 yr intern	64	Both schools have increased their intake, to 86 and 110 respectively. Two new medical schools have been started by the private sector. There is also suggestion of starting a medical school in the Lebanese University.
2. St. Joseph Faculty	M.D.	2nd part Bacc. + entrance exam.	7 yrs incl. intern.		
B. PHARMACY					
St. Joseph Faculty of Pharmacy	B.S.	2nd part Bacc.	5 yrs	30	
C. DENTISTRY					
St. Joseph Dental School	B.S.	2nd part Bacc.	5 yrs	50	
D. PUBLIC HEALTH					
Faculty of Health Sciences, AUB	B.S. (Envir. (Biostat. (Lab.Tech.	2nd part Bacc. 13 yrs	3 yrs	25 4 30	The Med. Lab. Course graduated its first batch. But it is a continuation of a Diploma course which started in 1954 and the total number of graduates = 500
	M.S. Epidemiology	B.S. or Health Profession & experience	2 years	3	
	M.P.H/Gen. Hosp.Adm.	B.S. or Health Prof.&experience	2 years) 9 months)	30	
	M.P.H/Health Serv. Hosp.	"	2 yrs (F.T.)		F.T. full time
			3 yrs (P.T.)		P.T. part time

TABLE F-5

E. NURSING					
1. AUB School of Nursing, Beirut	B.S.	12 yrs Baccalaureate	3 yrs	25	
	A.D. Ass.Degree	9 yrs	3 yrs	15	
2. St. Joseph Univ.	B.S.	12 yrs	3 yrs	60	
3. Lebanese University/ Lebanese Red Cross* Baabda	B.S.	12 yrs	3 yrs	- 8 (1982)	Minist. Decree No. 6 "L'Association des Infirmiers et Infirmières Diplômés de la Croix Rouge Internationale (officially recognized 1 March 1973)
(Tripoli)	B.S.			20(1982)	
(Beirut)	Tech.Bacc.	9 yrs	3 yrs	35	
4.Red Cross (Canada)	Tech.Bacc.	9 yrs	3 yrs	25	
5. Makassed Hospital (Beirut)	Tech.Bacc.	9 yrs	3 yrs	25	
6. Charity Hosp.(Beirut	Tech.Bacc.	9 yrs	3 yrs	30	
7. Notre Dame Hospital (Jounieh)	Tech.Bacc.	9 yrs	3 yrs	25	
8. Sahil School (Beirut)	Tech.Bacc.	9 yrs	3 yrs	25	
9. Greek Orthodox (St. Georges) (Beirut)	Tech.Bacc.	9 yrs	3 yrs	10	
10. Jbail School (Jbeil)	Tech.Bacc.	9 yrs	3 yrs	--	Has no graduates yet
NURSING AIDS	No special qual.	Variable not specified	In-service	?	All over the country, attached to hospitals
F. LABORATORY TECHNICIANS					
Faculty of Health Sciences, AUB	B.S.	2nd part Bacc. (13 yrs)	3 yrs	30	
St. Joseph University	Tech.Bacc.	9 yrs	3 yrs		
Lebanese University	Tech.Bacc.	9 yrs	3 yrs		
G. SANITARIANS					
School of Sanitarians (Tripoli)	Diploma MOH	9-10 yrs	3 yrs		The school is now closed. It has so far graduated 120. Graduates were not posted due to war.
* Plans	Ms.S.	B.S. + 2 yrs pract. exp.	2 yrs		When starting this with the only Nurse's school where post-graduate courses/degrees are provided.
	Ph.D.	Ms.S.	5 yrs		

Annex G to the Report of the February 1983

WHO/LRCS Health Sector Assessment and Planning Mission to Lebanon

PRIMARY HEALTH CARE IN LEBANON

1. Introduction

The primary health care approach is not new to Lebanon. Since the 1960's changing theories of development linked health to other sectors: concern with high infant, child and maternal mortality and morbidity rates directed support to maternal and child health services with an emphasis on prevention, and health professionals realized the value of involving the community in decisions about its health, of the importance of a more equitable distribution of resources, and of the use of appropriate technology. Law number 16352, passed in 1964,described how Lebanon was to be divided into four 'polar centres' of health and included detail on the hospital, health centres and community activities. In 1980 a further law was passed to set up health centres across Lebanon. However, various political, economic, planning, and management difficulties have hindered putting these laws into effect, to the extent that there is not one health centre in the country that delivers comprehensive primary health services. Also, to many people in Lebanon primary health care means primary medical care mainly available from hospitals and dispensaries, whereas the emphasis,adapted to factors within Lebanon, should be on the provision of front-line, first contact services and on continuity of care (referral system), all within the framework of five basic principles. These

principles are equitable distribution, community involvement, focus on prevention, a multi-sectoral approach, and appropriate technology. Within the framework of these principles, the basic components of a primary health care service are:

- Education about diseases, health problems, and their control
- Safe water and sanitation systems
- Maternal and child care, including family planning
- Immunization
- Appropriate treatment of common diseases and injuries
- Provision of essential drugs
- Promotion of proper nutrition

2. The present situation and major trends in Lebanon's health sector

Accurate data on dispensaries and health centres in Lebanon, including the actual number that are functioning, the levels of services offered, their coverage and impact, and the types and number of staff, are unavailable. Nor is there data on the health and disease problems and needs in the country. The lack of a health plan or policy has meant that many dispensaries have been set up for business and/or political reasons rather than on the basis of the needs of the population. Most care provided at dispensaries is free or fees of up to 5 Lebanese Pounds are charged.

Table 1 shows the total number of dispensaries in Lebanon by Mohafazat (region), with the population distribution. Of these 507 dispensaries, 59.2% are located in apartments, with the remaining 40.8% in separate buildings. More than 80% of the total number of the dispensaries occupy an area of less than 150 square meters. The table also shows that Beirut, despite having the highest population, has the least number of dispensaries.

Table 1. Dispensaries in Lebanon and the Population Distribution by Mohafazat.

Mohafazat	Number	Percentage	Population Distribution
Beirut	48	9.5	45%
North Lebanon	61	12	16%
Beqa'a	78	15.4	10%
South Lebanon	133	26.2	12%
Mount Lebanon	187	36.9	17%
Total	507	100%	100%

(Ref. AUB Study 1982, Dr Kronfol) (Ref. MOH, 1982)

In Table 2 the types of personnel employed in 268 of the 507 dispensaries shows a heavily physician dominated situation. There are more physicians than nurses, and almost equal numbers of ancillary staff (such as cleaners, drivers etc.) to nurses. There is an average of seven workers per dispensary.

Table 2 Personnel Employed in Dispensaries

Category	Number
Physicians	831
Nurses and midwives	534
Social worker	41
Pharmacists	12
Other	497
Total	1915

(Ref. AUB Study 1982 - Dr Kronfol)

Funding of these same 268 dispensaries is from a variety of sources, but the Ministry of Health and the Office of Social Development provide 47% of their total budget (Table 3).

Table 3. Funding of Dispensaries.

Source	Percentage
Office of Social Development	26.2
Ministry of Health	21.3
Political parties	13.8
Red Cross	13.8
Mouvement Social	11.4
Voluntary organizations	4.9
Municipality	4.4
Community	1.0
International agencies	1.0
Others	1.0
Total	100%

(Ref. AUB Study 1982- Dr Kronfol)

It is generally admitted that nearly all dispensaries, especially those in the rural areas, offer mostly curative care. This is partly a reflection on the lack of a health policy at central level. It also reflects the fact that the core curriculum of most doctors and nurses is not oriented to community health, and therefore the importance of a preventive health approach is not appreciated.

3. Ministry of Health proposals for strengthening Lebanon's health with regard to primary health care (MOH, December 1982)

The Ministry of Health's proposals for strengthening Lebanon's health services system emphasizes the following points which are all consonant with development of effective primary health care:

- The State is committed to provide personal and non-personal, curative and preventive, promotive and rehabilitative health services to the Lebanese population

- The political will is ready to back up the new health policy with moral and material support.

- The community to be served is a full and effective partner in the planning, programming, implementation and evaluation of its health services - through freely elected and active representatives.

- Prevention should take precedence over cure, and rehabilitation should follow disease - in the conceptual strategy of the decision makers in health.

- A certain degree of autonomous control to the regional and subregional units.

- Promotion of the partnership with the private sector, the professional associations and the labour unions.

With this new commitment to health, the challenge in primary health care now to Lebanon is how to :

- Translate the new strong political will at national level into a firm national strategy.

- Develop political will and support at the area level, and especially at community level, where defining a community may be difficult.

- Develop minimum national policy guidelines which will allow each area to adapt primary health care to its particular characteristics

- Adapt the concept and activities of primary health care to Lebanon given the predominence of the private medicine, hospital, physician orientation of the country.

- Ensure that adequate capital and especially recurrent funds are allocated by the government to primary health care services, in an equitable manner.

- Strengthen the existing management infrastructure at national and area levels, especially area hosptials, the referral system, supervision, and training, so that primary health care, which is but one part of the health system, can rely on support from these other levels of services.

- Overcome professional politics. Professional status implies adequate income, training and management for all levels of health workers and is especially crucial if primary health care is to attract high quality personnel and is not to be seen as second best. How will the possible resistance of doctors be overcome? The most influential doctors are possibly those whose first interest is curative medicine and for whom health is a business.

- Develop effective collaboration and co-ordination with the private sector, with the inter- and non-governmental organizations, and with the informal sector (e.g., traditional midwives), so that the community benefits from the wealth of existing experience, expertise and resources.

- Establish an epidemiological approach to the development of primary health care, so that the services developed are based on the needs and problems as determined with each community, combined with the professional knowledge and expertise available at local, area and central levels.

- Decide what priorities (e.g., geographical areas, special social groups) are necessary, within the stated policy.

- Replicate the known successes of small local projects on a national scale. The health plan is mainly a top-down exercise, but if the community is to be involved, the experiences of non-governmental agencies, the universities, and the informal sector need to be considered in order to ensure that the advantages of both 'top-down' and 'bottom-up' management processes are realized.

These are some of the considerable difficulties facing Lebanon in converting the primary health care approach into practice. The introduction or establishment of two distinct levels of organization may hopefully permit primary health care to be implemented effectively, by strengthening the planning and management capacity at the central level and by developing support for primary health care close to the periphery, e.g., at area level. Area level support must also complement the strong sense of self-reliance existing within most individuals, families and population groups.

In the proposed model the central level will maintain its policy, programming, legislative and budgeting activities but will permit, through administrative decentralization, the creation of a comprehensive area health level.

4. Findings and conclusions.

The following strategies for implementing primary health care should be considered within the overall health plan for Lebanon. However discussion with the Lebanese authorities is still needed on how to realistically integrate primary health care at central and area levels.

4.1 Reorganization for Support of Primary Health Care

4.1.1 Central Level.

Without a change of the present structure, there is a real danger that the primary health care concept, with its policy implications, will not be given the due attention it requires. Primary Health Care is best integrated with Social Welfare, as to date the Office of Social Development (presently with the Ministry of Labour) has proven itself to be one of the only bodies that has come close to implementing the primary health care approach.

Because of the present medical, hospital orientation of the country, both within the medical profession and among the general population, the reorganized "Ministry of Health and Social Affairs should have either a newly created Directorate of Social Welfare and Primary Health Care (see Diagram 1a) or a special Primary Health Care Unit within the Planning Office which might then be called the Office of Planning and PHC Programming; (see Diagram 1b). If a SW/PHC directorate were established, there would be two offices within it, one for Social Welfare and another for Primary Health Care (see Diagram 1c).

A central unit for primary health care would help ensure that central theoretical planning and local community successes would translate into overall, appropriate primary health care plans. Policy guidelines

would be established that would give the area health authorities minimum standards from which to adapt the approach according to their own specific local characteristics.

4.1.2 The Directorate or Unit of Social Welfare and Primary Health Care

This would primarily be concerned with family and community health services with a central co-ordinating office that will ensure inter-sectoral co-ordination and co-operation, and collaboration and/or co-ordination between the government, private and non-governmental health agencies concerned with social welfare and primary health care (see Diagram 2).

The Social Welfare Unit would include three offices, each primarily concerned with social support services that directly affect the well-being of the individual, family, and community:

- Child Day Care Services.
- Family Case Work.
- Educational Workshops.

The Primary Health Care Unit would include four offices :

-Health/Nutrition Education.
-School Health.
-Immunization.
-Family Health.

These primary health care offices are concerned with some of the main components of a primary health care service. Their role will be to develop policies in the context of the overall primary health care approach to ensure that primary health care forms the basis of the health system. The co-ordinating office within the Directorate will

ensure that those other components of primary health care that fall within other Directorates (e.g., safe water and basic sanitation in Environmental Health; appropriate treatment of common diseases and injuries in Medical Care; provision of essential drugs in the Laboratories and Pharmacy Directorate) are linked and planned effectively.

4.1.3 Area Level and Area Health and Social Authority

The area level will be one of the main keys to the success or failure of primary health care. For primary health care can only be implemented where a good infra-structure of hospitals and managerial support (e.g. referral system, supervision, and training) exists. Primary health care, which is but one part of the health system, and not an alternative to the area health services, must be able to rely on support to the primary health care approach from these other levels of service.

Diagrams 3a and 3b show the proposed relationship of the community health centres, where primary health care activities will primarily be based, with the hospitals and the management support activities within the office of the Executive Director.

4.2 Implementation of the main principles

The main activities in relation to support for primary health care may need to be developed as follows:

4.2.1 Inter-sectoral co-operation.

Opportunities for developing inter-sectoral co-operation should be given maximum support, to allow local health staff to respond to the needs of other sectors (e.g. education, agriculture and industry) and

to initiate their own demands of these sectors, leading to joint planning for better health. Both a formal and informal structure needs to be set up to ensure regular dialogue and appropriate action. The formal structure should encourage representatives from the private sector (e.g.,private hospitals), the commercial sector (e.g., pharmacies and cigarette manufacturers), and from sectors such as water, housing, and agriculture. Representatives may sit on the Executive Board of the AHA.

4.2.2 Collaboration and/or Co-ordination between the government, private, and non-government health agencies

This is crucial, because so many health agencies exist and because the private sector is very important. In order to avoid a predominance of "top-down" planning from central level, the experience of non-government agencies (such as voluntary organizations, academic centres, and the informal sector) with realistic peri-urban and/or village projects must be taken advantage of so that their 'bottom-up' experiences can contribute to primary health care development.

4.2.3 Community participation

This can be developed through two main structures, Government and informal.

The Government structure for community participation (see Diagram 3a) could involve, for example, the union of municipalities, which has shown to be effective in some areas of Lebanon, with representation on the Executive Board of the local AHA. It could also involve elected representatives of the community, both professional and other, who would sit on the Community Advisory Board which has a direct line of communication to the Executive Director of the local AHA.

The informal structure could involve mechanisms such as village or community committees, including professional personnel and, for example, priests, community elders, and traditional midwives, who may elect a representative to sit on the Community Advisory Board.

4.2.4 Referral system

The community health centre will provide a comprehensive range of primary health care activities but will need an effective mechanism for the referral of more specialist medical care and for surgical care. Referral would be primarily to the area level, and to the central level only for complex cases. Within national guidelines, each area will need to decide which types of illness can be dealt with within the government hospitals and which will need referral to private hospitals.

4.2.5 Financial support

The seriousness of the government's support for primary health care will particularly be reflected in the percentage of the health budget allocated to primary health care. At central level, the operating development budget must reflect adequate capital and recurrent funds. The development budget is important as the Minister of Health proposes that it give more support to those communities with greater health needs and/or smaller resources.

At area level strict control will be necessary to ensure that the autonomous budget generated by the AHA community is equitably distributed in the allocation of financial resources between primary health care and hospital care. The role of the community health centre in spending its proportion of the area budget will need to be planned later in the light of further information.

Costing and financing details have not yet been developed.

4.2.6 Manpower Development

Providing and retaining high quality workers within the community health centres will require improvements in salary and status, in-service training of trained personnel, and a strengthening of the middle level workers such as nurses (through, for example, the establishment of government nurse training schools). Consideration should be given to limiting the implementation of any more basic community health worker training programmes until important questions concerning such workers (i.e., their functions, utilization, selection, training, evaluation, and acceptance both by the community and by existing professional bodies) have been answered.

At the present time there is too much emphasis on hospital based care and little on community health care. Admission requirement and examinations are favouring intellectual capacities and neglect such important human attributes as practical skills and attitudes. If this remains unchanged, little can be expected from future health workers in terms of preparedness and competencies needed in primary health care.

4.2.7 Management

The present weak management structure will need to be strengthened through the re-orientation of health workers in both management skills and health care. An epidemiological approach to determine needs and problems at both central and area level and within the community will help ensure that planning decisions are taken at all levels, and that day-to-day management especially,remains a local responsibility.

At central level, equitable distribution of resources will, for example, be an important management issue. As an increasing percentage of the population lives in Beirut and other cities and towns, the needs of the peri-urban and poor must be not be neglected

because of false beliefs that primary health care is primarily for the remote rural areas. Initially, one or two well designed health centres that provide the elements of primary health care should be provided in each Mohafazat.

4.2.8 Facilities, Equipment and Supplies

The establishment of the autonomous AHA's will hopefully minimize the present reliance of government facilities outside Beirut on an extended chain of bureaucratic procedures for obtaining equipment and supplies.

The provision of equipment should be standardized, especially where offers from internaticnal agencies are concerned, so that lack of spare parts and difficulties in regular maintenance will not continue to contribute to most equipment's becoming unuseable within a few months.

Community health care centres will need (apart from personnel) the following in order to provide high quality health care;

- A building of at least 200 square metres
- Appropriate basic equipment for preventive, promotive, and curative health care
- Basic laboratory, X-ray, transport and communication facilities
- Adequate amounts of all essential drugs and supplies, regularly received
- 5-6 day care beds

5. Recommendations

5.1 Phase I (up to 12 months)

Confirm the political will of the government by signing and implementing new laws on the organization of primary health care.

Ensure that adequate capital and recurrent funds are allocated.

Establish an epidemiological approach to the development of primary health care, with emphasis on evaluation of health care and on disease surveillance, so that the services developed are based on the needs of the population and take into account the available resources and cultural, socio-economic and political factors.

Re-orient all levels of trained health workers in community health, through national, area and local workshops.

Review the training curricula of all health workers, and ensure that community health is a core subject for all.

Obtain the funds to establish a government nurse training school (Baccalaureate technical level) in each Mohafazat.

Establish laws requiring graduates of government medical, nursing and other health training establishments stay in government service for 2-3 years after completion of training.

Revise the salary and working conditions of all levels of health workers. Allow each area health authority to determine the salary structure, outside of civil service regulations (and in parallel try to improve the civil service structure).

Establish (upgrade) 2 health centres in each Mohafazat. Each might cover a population of around 30000 and have a staff level of about 16 (e.g., 2-3 doctors, 2 nurses, 2 midwives, 2 practical nurses, 1 laboratory technician, 1 X ray technician, 1 sanitarian, 1 social worker, and 1 clerk, 1 driver and cleaner.) Facilities should include the provision of essential drugs, a basic laboratory, an X-ray machine, one ambulance, a car, and possibly 5-6 day case beds.

Develop promotional structures within community health for all levels of manpower.

Ensure that if nurses prescribe treatment (e.g., during home visiting) they are legally covered.

Establish a General Nursing Council and a General Medical Council.

Encourage the informal sector (e.g., traditional midwives) to play an active role.

Create a link between physicians, nurses, and allied health personnel which allows for regular exchange of information, supervision, and in-service training.

Depending on the results of epidemiological and social science studies, determine specifically where the health centres will be situated, how they will relate to the hospitals, etc.

5.2 Phase II (long-term, beginning in 1983-1985)

Establish the nursing schools and the training centres for allied health personnel.

Upgrade existing dispensaries throughout the whole country as management and training skills are developed, and build new centres if epidemiological, social science, and health care studies show them to be necessary.

Develop health indicators (measures for assessing to what extent health goals, objectives or targets are being met, or markers that help map the trend, or need for change), and use them in making health services planning and management decisions.

Seek the collaboration of traditional midwives,and integrate them into services at the community level (with appropriate training).

Diagram 1a

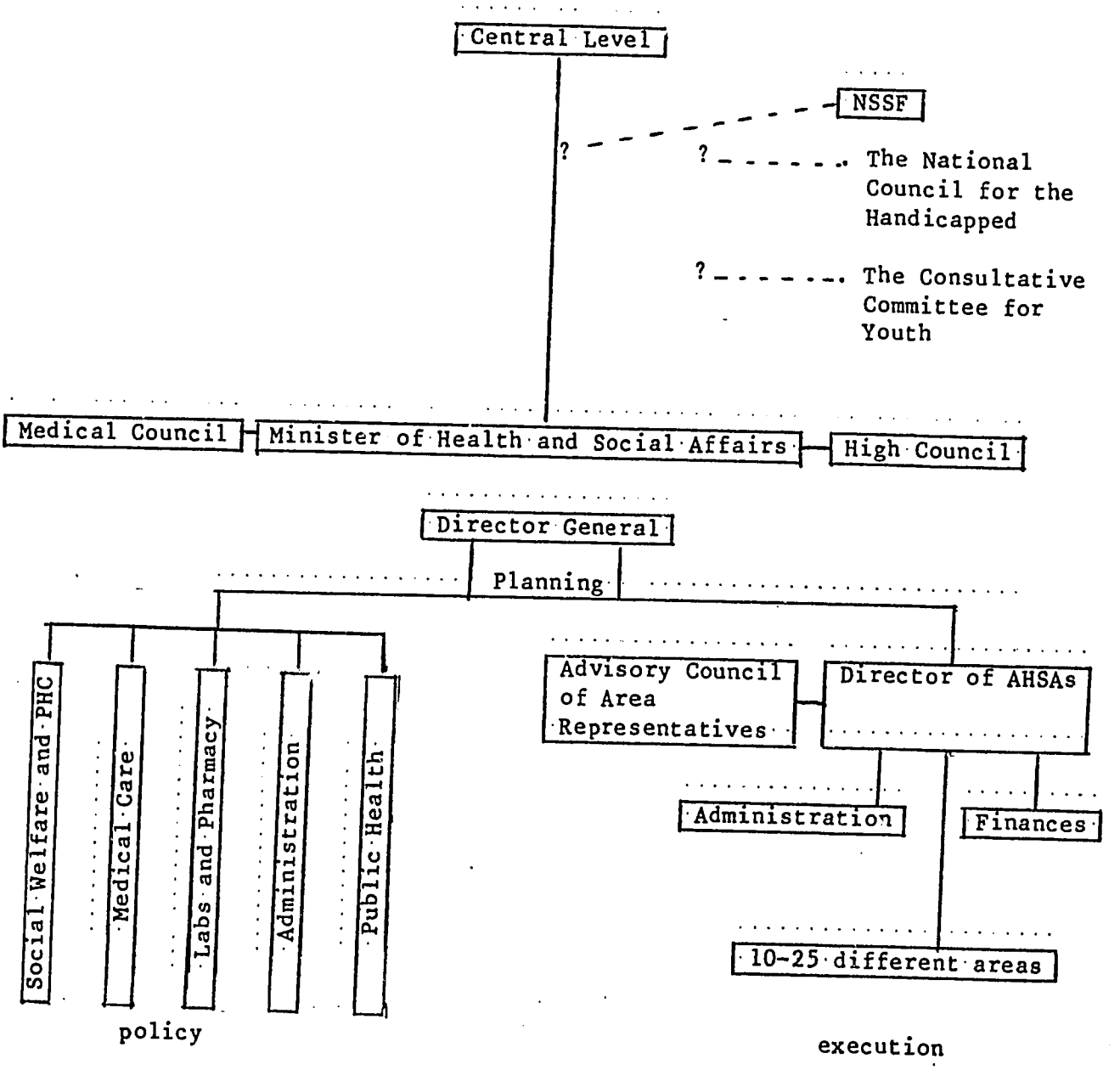

Central Level
NSSF
?
?
The National Council for the Handicapped
?
The Consultative Committee for Youth
Medical Council
Minister of Health and Social Affairs
High Council
Director General
Planning
Social Welfare and PHC
Medical Care
Labs and Pharmacy
Administration
Public Health
policy
Advisory Council of Area Representatives
Director of AHSAs
Administration
Finances
10-25 different areas
execution

Diagram 1b

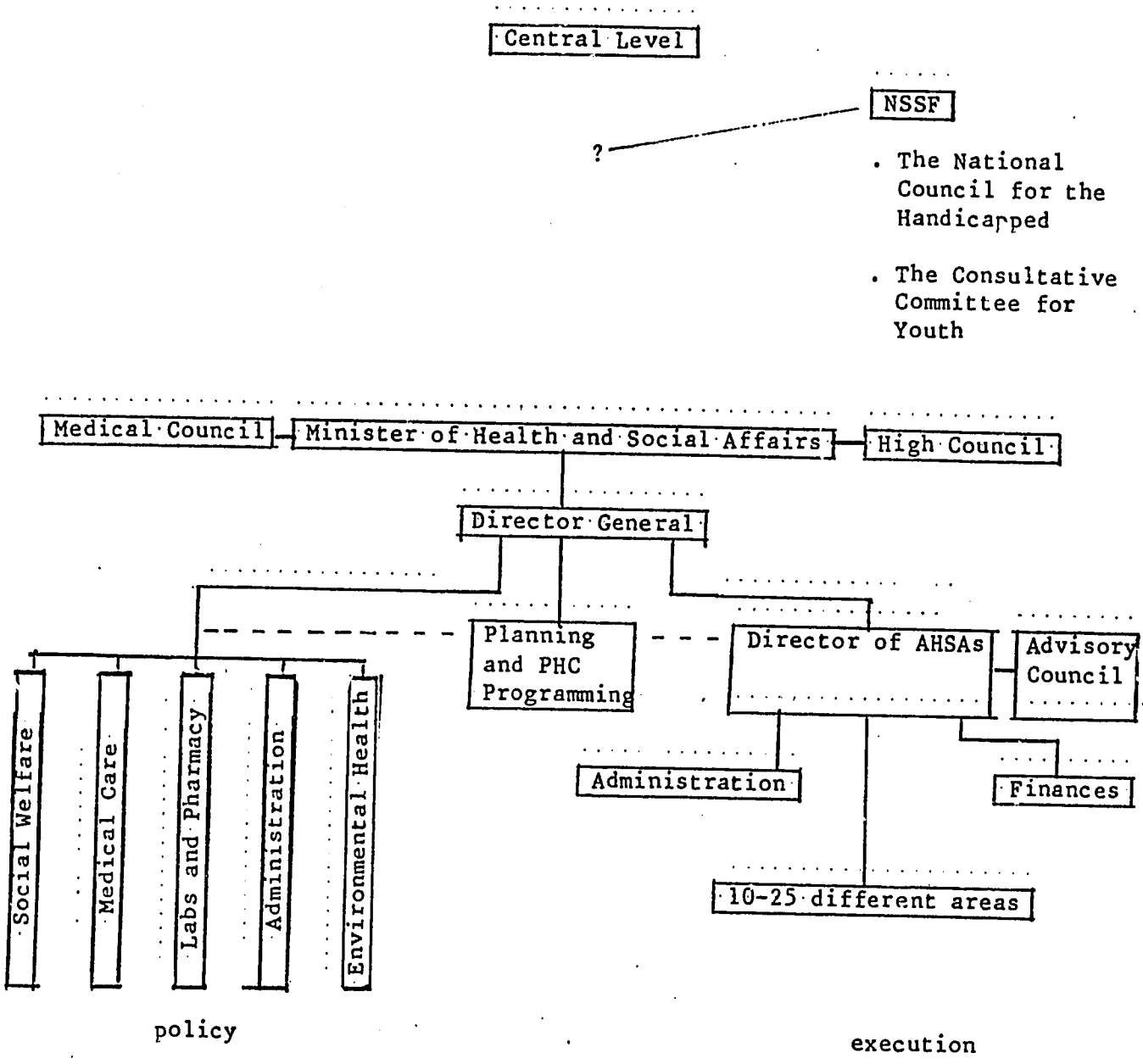

Central Level
NSSF
?
The National Council for the Handicapped
The Consultative Committee for Youth
Medical Council
Minister of Health and Social Affairs
High Council
Director General
Planning and PHC Programming
Director of AHSAs
Advisory Council
Administration
Finances
10-25 different areas
Social Welfare
Medical Care
Labs and Pharmacy
Administration
Environmental Health
policy
execution

Diagram 2

Directorate of Social Welfare and PHC

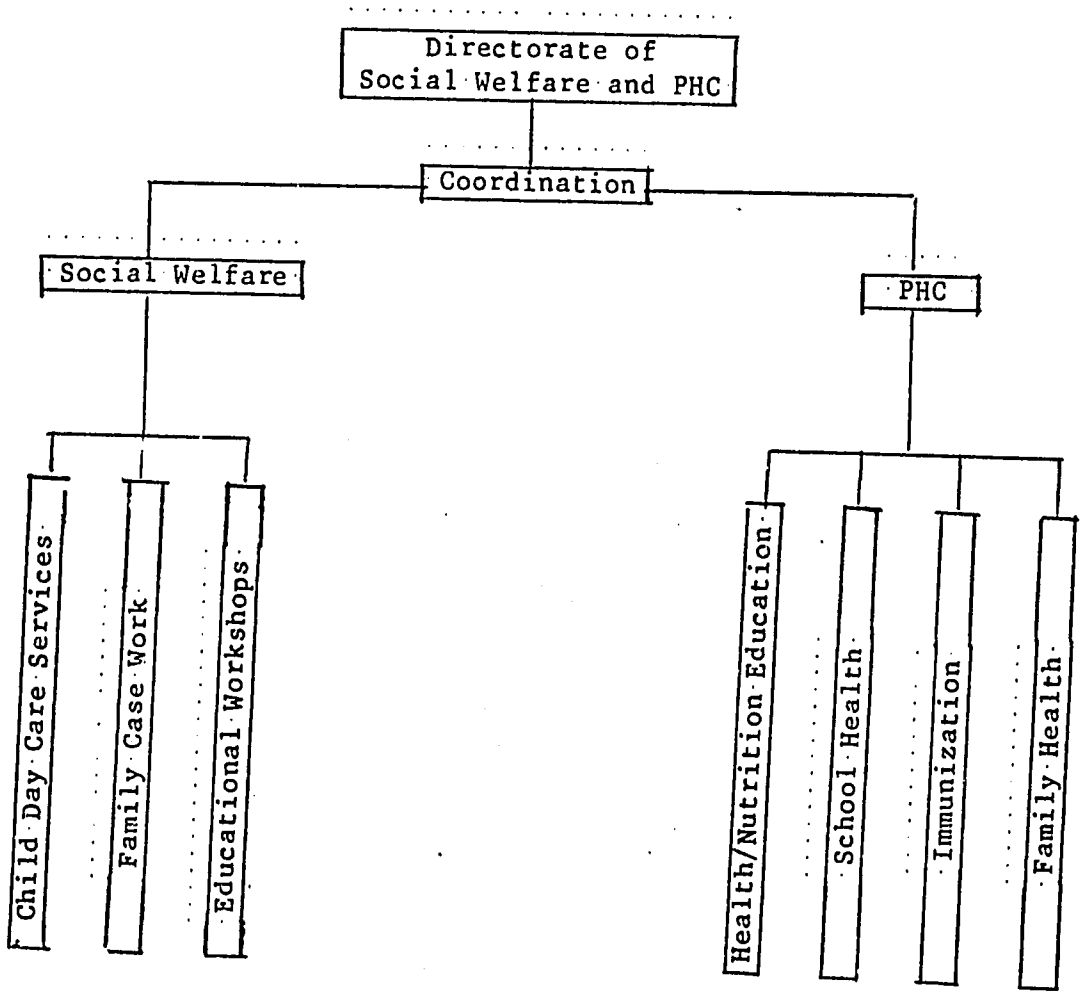


Diagram 3a

Area Level, Alternative "a"

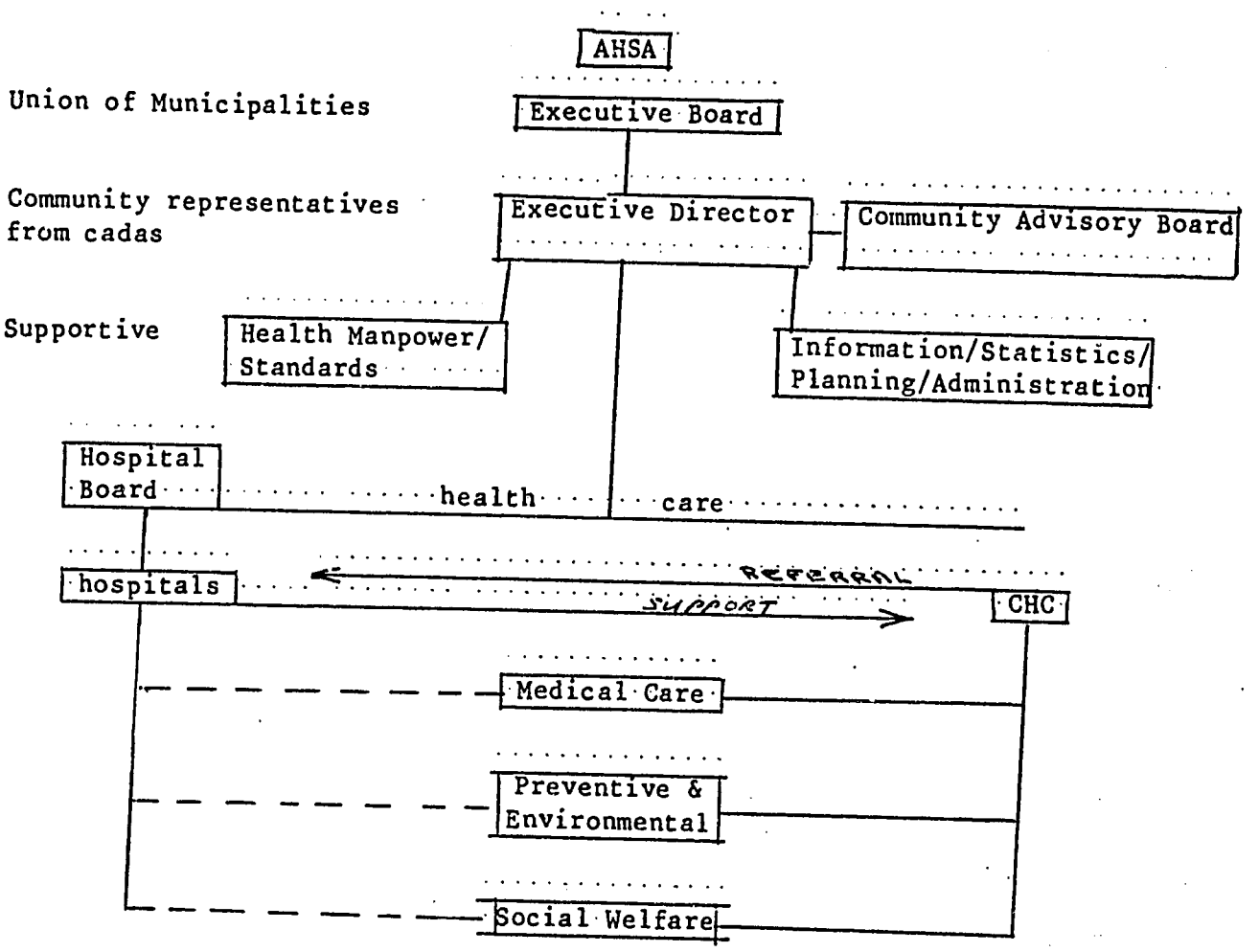


Diagram 3a "x" (Working Revision of part of Diagram 3a)

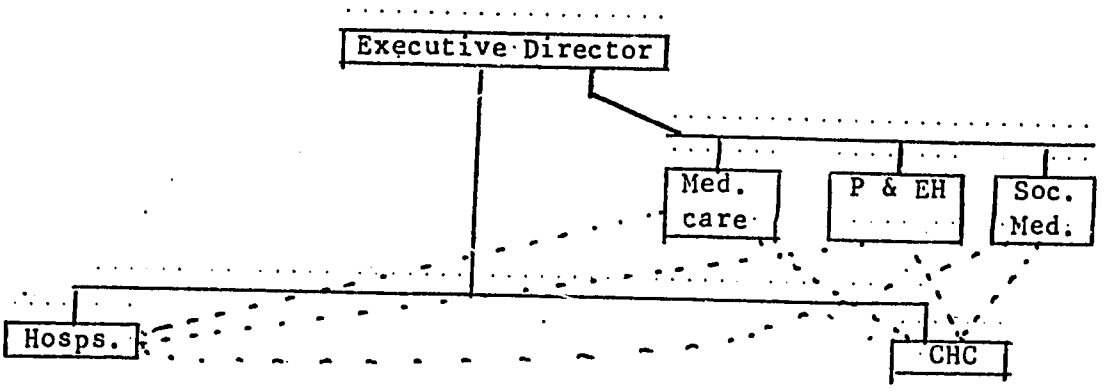
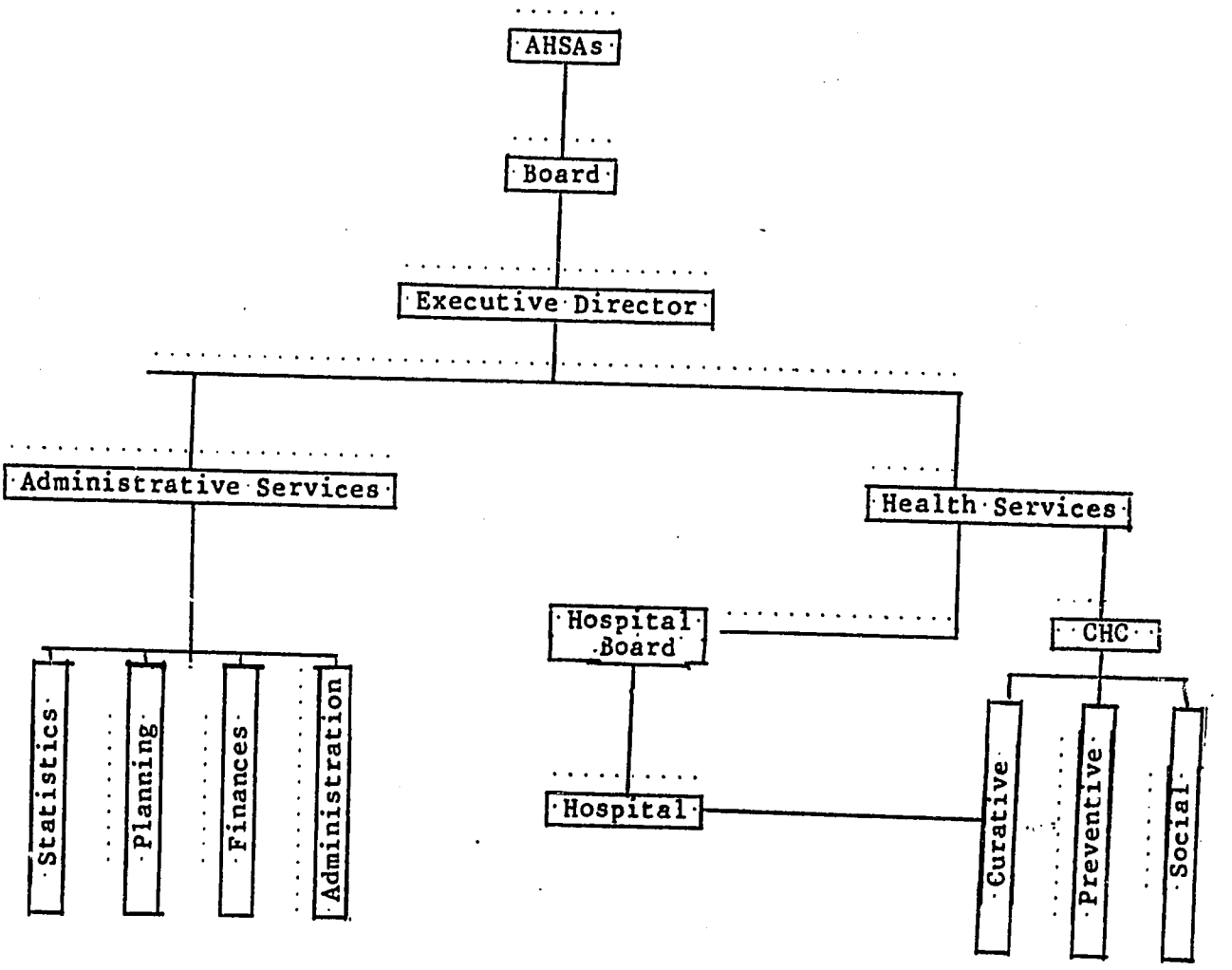


Diagram 3b

Area Level, Alternative "b"



Annex H to the Report of the February 1983

WHO/LRCS Health Sector Assessment and Planning Mission to Lebanon

PREVENTIVE AND EPIDEMIOLOGICAL SERVICES

1. Introduction

The concept of public health has gradually expanded from its previous limited concern with the physical environment and sanitation to cover preventive services and more recently promotion of positive health.

It now covers a variety of services including environmental health, disease prevention and control, and social and occupational health. One of the essential disciplines which cuts across all the above services is epidemiology.

Although the construction and maintenance costs of some of the elements of public health services (e.g., water supply systems and sewage disposal plants) are admittedly great, in the long run they prove to be less expensive than the illnesses that are caused by deficiency in these services. It must therefore be emphasized that preventive and promotive health activities offer a sound financial investment to the individual and to the community.

Public health workers are at a disadvantage in that they cannot easily point to their successes, unlike clinicians who with justification can point to the saving of many specific lives by their judicious medical and surgical management. In addition, provisions for medical care are substantially supported by the private sector, while public health services are always left to the governments, and especially to Ministries of Health.

Epidemiological information provides the foundation upon which all other parts of the public health programme are constructed. Information on health problems affecting the population is a basic essential tool for effective health planning and programming. To be able to determine needs for facilities and services, it is necessary to measure the level of health of the population and to be able to answer the questions as to the main health problems, their magnitude, the groups affected, and when and where the problems occur with the greatest frequency.

The value of measuring the level of health does not stop at the stage of planning for the provision of health services but goes beyond that to measuring the outcomes of the services and assessing their adequacy and efficiency.

2. Assessment of the Situation

2.1 According to the organogram of the MOH preventive and promotive health services at the peripheral level are the responsibility of the Qadaa medical officers and the health workers. Unfortunately the Qadaa medical officers are almost totally occupied with the provision of curative services in their districts. The number of health workers who are actually engaged in peripheral health services is very small. Their job descriptions are vague and so they have little, if anyimpact. This rather weak peripheral structure is reflected all through the preventive and promotive activities of the MOH.

2.2 The share of public health activities in the budget of the MOH is very small and is less than 1% of what is allocated for treatment of cases of illness.

2.3 Review of the present situation (detailed below) leads to the conclusion that public health activities, and especially preventive and epidemiological services are rather marginal. They are not given the priority they deserve. The use of appropriate epidemiology is almost absent at the various levels of Government health services in Lebanon, but some key personnel are available

for training epidemiological workers and developing an adequate national epidemiological surveillance and analysis system.

2.3.1 The present fragmented private, curative health care system in Lebanon lacks the ability to provide relevant epidemiological information. At the local or community level, health personnel, especially doctors, rarely report diseases to the health department, although they are obliged to do so (for some diseases) by law. A similar situation exists with respect to health establishments such as clinics, dispensaries and hospitals. This has resulted in the present situation in which only scattered information is available to the health authorities.

2.3.2 In the present situation all collected information is for use by higher levels only. Health workers collecting the information do not take part in the analysis or the interpretation of the data and don't see how the data are used, so they do not feel the value and the need for accuracy and completeness. In addition, data analyses are not made against the essential local background in the community.

2.3.3 The department of vital and health statistics of the MOH has been non-functional and practically non-existent since 1975. This department produced annual reports for the years 1956 to 1971. At that time its role was only as a processor of information which in many instances was deficient both in its comprehensiveness and in its quality. The collected data were rarely, if ever, selected, collected, and processed to facilitate or improve decision making, and rarely led to any actions. Hence, the essential basis of epidemiological surveillance (namely information for action), was missing, and it continues to be missing now, to the detriment of effective health services.

2.3.4 At the central level of the MOH, there is an existing structure for epidemiological services, yet these services have been almost at a standstill for many years in view of several constraints which are well known to all concerned. Central supervision over the minimal field activities is

inadequate, as are the analysis, use, and feedback of available epidemiological data. Many of these functions are practically non-existent. Hence there are few or no possibilities for ensuring regular identification of unusual situations such as outbreaks and epidemics or for ensuring appropriate and timely responses.

2.3.5 As a result of war, some risk factors such as disrupted sanitation, population movements, etc., are accumulating and can stress the health situation, especially in relation to communicable diseases outbreaks.

2.3.6 In spite of the above-mentioned situation, Lebanon is in a unique situation of being potentially capable of developing and implementing sound epidemiological work, in view of the presence of Universities which have well-experienced groups in training and in the use of epidemiology. They have been able, in the midst of the most difficult situations, to implement pilot epidemiological surveillance activities which could with slight modification serve as models for future development of these services in Lebanon.

3. The Proposed New Health Policy

The proposed new health policy with the primary health care approach offers a good chance for the implementation of public health activities at the peripheral level which is at present the weakest link in the development of sound public health services. It has to be stressed here that preventive services at this level should not have a special structure apart from other aspects of health services. All health personnel at the primary health care level should be responsible for offering all the basic elements of public health.

With respect to the development of epidemiological services, it is to be noted that the proposed general framework for a health information system for the MOH (developed by the Task Force on Health Information) is a step forward in the development of epidemiological services at the central level. The

national task force, however, did not give sufficient thought and consideration to the local level as a source of information and to its potential in the interpretation and utilization of information. At the local level, where health workers are expected to help communities to solve their health problems, the application of basic epidemiological principles can be most helpful. Local health workers are most suited for this purpose as they are often in the best position to interpret the situation in the light of local realities. By bringing epidemiological principles to peripheral health care, new dimensions will be added to this important tool, and several benefits are envisaged, namely:

- Improvement of the quality of information and of its utilization, not only at the local level but at the central level.

- Health workers will attain a certain degree of confidence and self reliance based on analytical thinking. This will in turn help them to give better support to the community they serve and to be capable of effectively evaluating and managing the health of the community.

- The practice of analytical thinking and decision-making will help the health workers to motivate and educate the community and to be capable of securing community participation.

- By local analysis and interpretation, necessary actions can be taken on the spot in the light of the local situation. This gives a better chance for success of control activities.

4. Recommendations

The long-term objective for successful public health services should be directed towards having these services as an integrated component of the national health policy implemented at all levels of health services. The following recommendations represent steps in that direction:

4.1 Reactivate and support the Directorate of Public Health at the Ministry, under the leadership of an epidemiologist who should have the responsibility of developing epidemiological services at all levels in close collaboration with various sections, particularly health statistics and primary health care. As well, the Public Health Department in each province should have the services of a trained public health specialist.

4.2 There is an immediate need for evaluating the health situation and hence the health needs. It is therefore recommended to initiate a National Epidemiological Survey of morbidity to obtain population based information from representative samples of the population of Lebanon. It should also include an in-depth epidemiological investigation of the major health problems in the country. The MOH Health Planning Unit will be most suitable to undertake this survey, in collaboration with the School of Health Sciences of the American University of Beirut.

4.3 In parallel with the above, it is necessary to work towards obtaining accurate comprehensive information from the existing health care system, whether Government, private or voluntary, and from individual health providers and health establishments. The modality of this needs to be discussed in a national seminar where all the authorities concerned will be represented. Due consideration should be given to the design of the reporting forms and to the mechanisms for reporting, including immediate reporting whenever needed.

4.4 Responsible authorities of the MOH should discuss with training institutes (perhaps in a national workshop) the need to strengthen the public health teaching programmes and to ensure their comprehensive coverage of the various disciplines. The contents of training are to be related to the tasks envisaged for the particular category of health workers. However, a minimum need will be that all health workers acquire the basic principles of public health and particularly ability to make observations and to record, count, classify and present their data using simple epidemiological tools such as maps, charts, etc.

4.5 In-service training for health workers should be provided, through organized courses, training manuals, and regular supportive supervision by the central and regional staff.

Annex I to the Report of the February 1983

WHO/LRCS Health Sector Assessment and Planning Mission to Lebanon

ENVIRONMENTAL HEALTH

1. Situation Assessment

It is estimated that 95 per cent of the population of Lebanon are served by public water supply systems, although severe deficiencies in the quantity and allocation of public supplies are apparent. Most of the water supplies are chlorinated, but many chlorinators have been out of order for sometime. In Beirut, intermittent supply and decayed water and sewerage pipes are posing a health hazard for the consumers. It is estimated that nearly 50% of Beirut water supply is lost through leakage from broken joints and pipes.

Wastewater does not receive any appropriate treatment or disposal under safe controlled conditions. Raw sewage from municipal systems is used directly in irrigation and washing of vegetables in the Bekaa Valley. Sewage discharges from mountain communities enter sinkholes in streambeds, and pass through cavernous-limestone formations to pollute large water supply springs near the coast. The coastal urban areas of Tripoli, Jounieh, Beirut and Saida discharge their raw domestic and industrial wastes to the Mediterranean Sea, either directly through short sea outfalls or indirectly via small coastal streams, irrigation ditches, and drainage channels.

On-site or private wastewater disposal systems do not perform adequately in the populated regions of the country for a variety of reasons: the prevalence of multi-story buildings on small land plots; the generally steep terrain and thin layers of pervious or clay soils; and the cavernous-limestone formations underlying two-thirds of Lebanon. Springs are contaminated by on-site disposal systems, a situation which is aggravated by the lack of control over land use and development in the vicinity of springs.

Although adequate public health statistics are lacking, diarrhoeal and parasitic diseases as well as viral hepatitis are prevalent.

2. Recommendations regarding environmental health

2.1 Priorities for Wastewater*

- Stop the practice of irrigating agricultural lands with raw sewage unless adequate treatment of sewage is provided.
- Protection of water supply springs.
- Rehabilitation of existing works and completion of previously designed works.
- Providing wastewater collection and treatment for major urban areas.
- Providing wastewater collection and treatment for inland wastersheds.
- Enhancing wastewater disposal at urban coastal areas by constructing ocean outfalls.
- Completion of inland watershed protection.

2.2 Priorities for drainage*

- Channel cleaning.
- Rehabilitation of existing drainage systems.
- Relief drains and channel improvements for rectifying existing problems and for providing for future develoment.

2.3 Priorities for solid wastes*

- Nationwide cleanup of litter and debris.
- Establishment of landfills and coastal reclamation sites.

2.4 Priorities for water supplies

- Development of a national Master Plan for water supplies.
- Rehabilitation of old water networks.
- Improvement of maintenance of water treatment plants (chlorinators).
- Development of an appropriate drinking water quality management system.

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* See recommendations given in detail in: National Master Plans for Wastewater, Drainage and Solid Wastes. Project: National Waste Management Plan LEB/BSM/002.

Annex J to the Report of the February 1983

WHO/LRCS Health Sector Assessment and Planning Mission to Leban

MATERNAL AND CHILD HEALTH SERVICES IN LEBANON*

1. Assessment of the Situation

While up-to-date population indices and disease incidence/prevalence data are lacking, it is possible nevertheless to give some estimates on the present state of affairs by making cautious inferences from data collected in selected groups (3, 4, 5) and from observations and interviews during visits to public and private hospitals, dispensaries, and basic services centres(6).

1.1 Morbidity Pattern

Upper Respiratory Tract Infections (URTI) and diarrhoeal diseases head the list, no less than in many developing and industrialised countries. Infectious diseases are endemic and run parallel to the socio-economic and cultural characteristics of the various population groups in Lebanon. We have

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*The concept of Maternal and Child Health (MCH) is well known in Lebanon and is linked to Dr. Jamal K. Harfouche (1,2). Her efforts and achievements in MCH are prominent, and her experience and sustained enthusiasm must make her an invaluable advisor to the Lebanese Government. It is almost presumptuous then to advise on what ought to be done in the field of MCH. Most of our assessment and recommendations therefore should be seen as a review of matters which have already been analysed in depth by her and her collaborators.

been told that the incidence of skin infections was not increased during the war to a visible extent; skin infections actually seem to be even less prevalent now than before the war. (However it is also known that scabies and other skin infections bear a social stigma and therefore their true prevalence may be higher than reported). A malnutrition (PEM), according to all reports we have received, is restricted to groups living in particularly difficult situations (e.g. refugees). There seems to be a stable 5-10% of undernutrition (defined as low-weight and height for age) in the underfives. Studies on growth and illness patterns of Lebanese children were initiated in 1960. Local growth standards for boys and girls 1-18 months of age were published in 1969 (7). Other local longitudinal health and growth data were produced some years later again (8), and the nutritional status was classified according to weight/length (9).

According to various sources there is a high incidence of mental retardation among children. They occur in clusters and seem to be related to the mosaic of different ethnic origins and to high consanguineous marriages in certain communities (11,12).

1.2 Services

1.2.1 Service Patterns

MCH services are provided in various settings (hospitals, dispensaries, basic services units, and by private practitioners). They are usually of a curative nature.

While there is a dense network of dispensaries, the type of services delivered in them is governed by priorities set by the providers and therefore may not be in accord with the needs of the consumers. The quality of care offered varies greatly. Most government facilities suffer from the irregular and insufficient provision of drugs and of qualified health personnel. Midwives are only available in a few peripheral centres. Depending on the region and community, traditional birth attendants (TBA) are responsible for about 40% of deliveries.

1.2.2 Immunizations

Immunization status varies greatly from community to community (4). Most health workers contacted believe that no more than 40-60% of susceptible subjects are protected. Coverage, however, has been much higher where concerted immunization campaigns have been conducted (3). There are anecdotal reports of isolated cases of poliomyelities.

1.2.3 Records

There is a conspicuous absence of health records, and where available, they are often incomplete, both clinic and home based.

1.2.4 Kindergarten

We have not been able to visit any kindergarten but a vivid account of their dismal state of affairs has been given to us (10).

2. Comments and Conclusions

MCH is an integral part of primary health care (PHC) and constitutes one of its pillars. Furthermore, preventive aspects in MCH should be given precedence over curative aspects.

It is striking that, despite low immunization levels and despite the disruption of communities and medico-social services for them, infectious diseases among children do not seem to be a major health problem so far. It would be wrong, however, to believe that no vaccinations are needed as long as there are no signs of acute illness. Sporadic cases of poliomyelitis for example, should alert the responsible authorities and lead to preventive action.

Previous longitudinal and cross-sectional studies have assessed the nutritional status of Lebanese children (7,8,9), yet we have not come across any standardised growth charts.

Patterns of treatment reflect linear cause/effect thinking with regard to health and disease. In line with such thinking, drugs are thought by many to be the answer to most health problems, and drugs are prescribed in an indiscriminate and excessive way. For example, oral rehydration mixtures seem to be readily available and are given to children suffering from diarrhoeal disease, but unfortunately antibiotics and anti-diarrhoeal agents are often prescribed concomitantly(13). The hazards related to the administration of antidiarrhoeal agents, especially when coupled with antibiotics such as sulfonamides and/or neomycin, are described in many medical textbooks. The predominance of curative over preventive services is alarming. The lack of regular and appropriate supplies of drugs/equipment in peripheral centres is obvious. These issues are clearly related to the lack of managerial and administrative skills and to lack of coherent directives at a more central level.

The TBA plays an important practical role in MCH: she is the midwife who is acceptable to many segments within the Lebanese population. It is not logical that TBA are legally forbidden to do their work when it is widely known that do practise and that their services will continue to be used by many families.

Maintenance of quality medical records is an essential part of medical care in general. The lack of good medical records is regrettable, among other reasons, because they would constitute an invaluable help in the collection of baseline and follow-up data on health and disease.

The building and equipment of kindergartens lies mainly within the responsibilities of the Ministry of Education. However the message given to us by health workers is clear enough: MCH services must be included in their operations.

3. Recommendations/Proposals

3.1 Immediate Needs (6 months to 1 year)

3.1.1 MCH is an accepted part of community health care, and the country is in the enviable position of having professionals of international reputation with a wealth of on-site acquired experience whom the MOH must continue to tap as a source of advice.

3.1.2 The reported recrudescence of poliomyelitis needs immediate and unequivocal confirmation/refutation. A vaccination campaign against poliomyelitis should be instituted. If a nationwide campaign proves impossible at the present time, the focal areas of disease must be identified and vaccination provided to all susceptibles in the concerned communities.

3.1.3 Training should be of an "in-service" type to start with, and particular attention should be given to the importance of preventive care in MCH and to the use of oral rehydration without anti-diarrhoeal agents.

3.2 Within the Next 3 Years

3.2.1 The full range of immunizations (DTP, Polio, Measles) should be provided on a national (public) basis, including record maintenance both in a "family health booklet" and in clinical record forms.

3.2.2 The full programme of MCH should include the following basic health services:

- Environmental Health
- Health/Nutrition Education
- Personal Health Services: Maternal Health/Family Planning;
- Child Health/Immunizations (including growth monitoring and periodic surveillance for early detection and management

of common illness and of possible nutritional deficiencies; home visiting.

- School health

3.2.3 Additional monitoring to protect health of mothers and children should include:

- Antenatal (pregnancy); VDRL; BP; weight gain; urine analysis (albuminurea)

- Neonatal: anthropometric measurements (head circumference, weight, length); BG and RH; PKU test; Red Reflex test (a normal red reflex indicates that the lens is clear); physical examination (structural abnormalities, e.g., cleft palate, femoral pulses, cardiac souffles, breathing pattern, icterus, ortolani for possible congenital hip dislocation at age three months, and neurological status via sucking, swallowing, primitive reflexes, and tonus)

- Infant: Vision at 6 months - response to moving object
  - squints are abnormal after 6 months

  Hearing at 6-9 months (and again at the preschool examination)

  Check Hb at 3-4 months

  Start immunizations at 3-4 months

3.2.4 Growth charts should be reintroduced for the regular monitoring of growth and development, at least among small children.

3.2.5 If a repeat study on a representative sample confirms earlier results of a satisfactory nutritional status among preschool children, MCH programmes should be directed preferably to the mother and child up to 2 years of age(8) and underfive clinics may be uneconomical.

3.2.6 The importance of curricular changes (problem-based, community-oriented, epidemiological-preventive approach) and reeducation at all levels of health

manpower training has been stressed in this mission's reports on Health Manpower and Training and on Primary Health Care. Managerial and administrative skills must also be introduced.

3.2.7 Preventive services are an essential part of MCH. As the OSD (Office of Social Development), associated with the municipality in some cases and with voluntary agencies in other cases, have acquired much experience through their long standing involvement in this sector of medical care, they should continue to be given responsibility for the administration and coordination of such services in the future.

3.2.8 Traditional birth attendants should be integrated and retrained. There is evidence, however, that TBA are effective only when they are trained for specific skills such as reducing the incidence/prevalence of neonatal tetanus or when they work in close contact with highly professional systems of maternal and perinatal health care(14).

3.2.9 Special studies should be conducted with regard to the autosomal recessive inheritance of abnormal genes (carrying the same abnormal gene is considerably increased in first cousin marriages) in the concerned communities. Investigations of disorders of haemoglobin synthesis (sickle cell disease; thalassaemic syndromes) should be done also. A service for genetic counselling may be considered then.

REFERENCES

1. Harfouche JK Infant Health in Lebanon: Customs and Taboos, Beirut. Khayats 1965.

2. Harfouche JK Social Structure of Low-Income Families in Lebanon, Beirut. Khayats 1965.

3. Foster SD, Weisfeld JS. Health Assessment of Palestinian Refugees in Beirut and Southern Lebanon. International Health Programme Office. CDC (September 27 - October 8) 1982.

4. Harfouche JK et al., Lebanon: A Peri-Urban Family Health Centre. Leb. J. Med.?

5. Deeb MJ., Tawtal N. Assessment of Phase I of the Basic Services Units Project in Lebanon.

6. Health care facilities seen by the members of the WHO/LRDC mission developing this MCH report included: Government Hospital, Saida: Municipality Dispensary Ghaziye; Government Hospital, Tyr; Central Dispensary, Tripoli; Governmental Dispensary, Halba; Health Centre, Halba; Government Hospital, Akkar (Halba); Government Hospital, Tripoli (Qabeh); Government Hospital, Tripoli (Orange Nassan); and OSD Basic Health Centre (Borj El Braine).

7. Harfouche JK. Growth and Illness Patterns of Lebanese Infants. Beirut. Khayats 1966.

8. Kanawati AA, McLaren DS and Darwish O. Failure to Thrive in Lebanon. IV. Longitudinal Health and Growth Data. Acta Paediatr. Scand. 1974;63:849-54.

9. McLaren DS, Read WW. Weight/Length Classification of Nutritional Status. Lancet 1975:219-21.

10. Mme Nazet Malek, Comité National des Enfants.

11. Der Kaloustian, W. Naffah J, Loiselet J. Genetic Diseases in Lebanon. Am. J. Med. Genet. 1980;7:187-203.

12. Basson PH. Genetic Diseases and Culture Patterns in Lebanon. Am. J. Med. Genet. 1980;7:187-203.

13. Example: Diarid R, Comp: Neomycin sulf 150 mg/Succinyl sulfathiazole 1.5 gr/Kaolin/Pectin/Atropin Sulfate 9.7 mcg/Hyosoyamine Sulf, 51.9 mcg/Hyoscine Hydrobromide 3.25 mg in each tablespoon (= 15 cc).

Instr.: do not give longer than 5-7 days(1)

14. Why retrain Traditional Birth Attendants? (Editorial) Lancet 1983; i:223-29.

Annex K to the Report of the February 1983

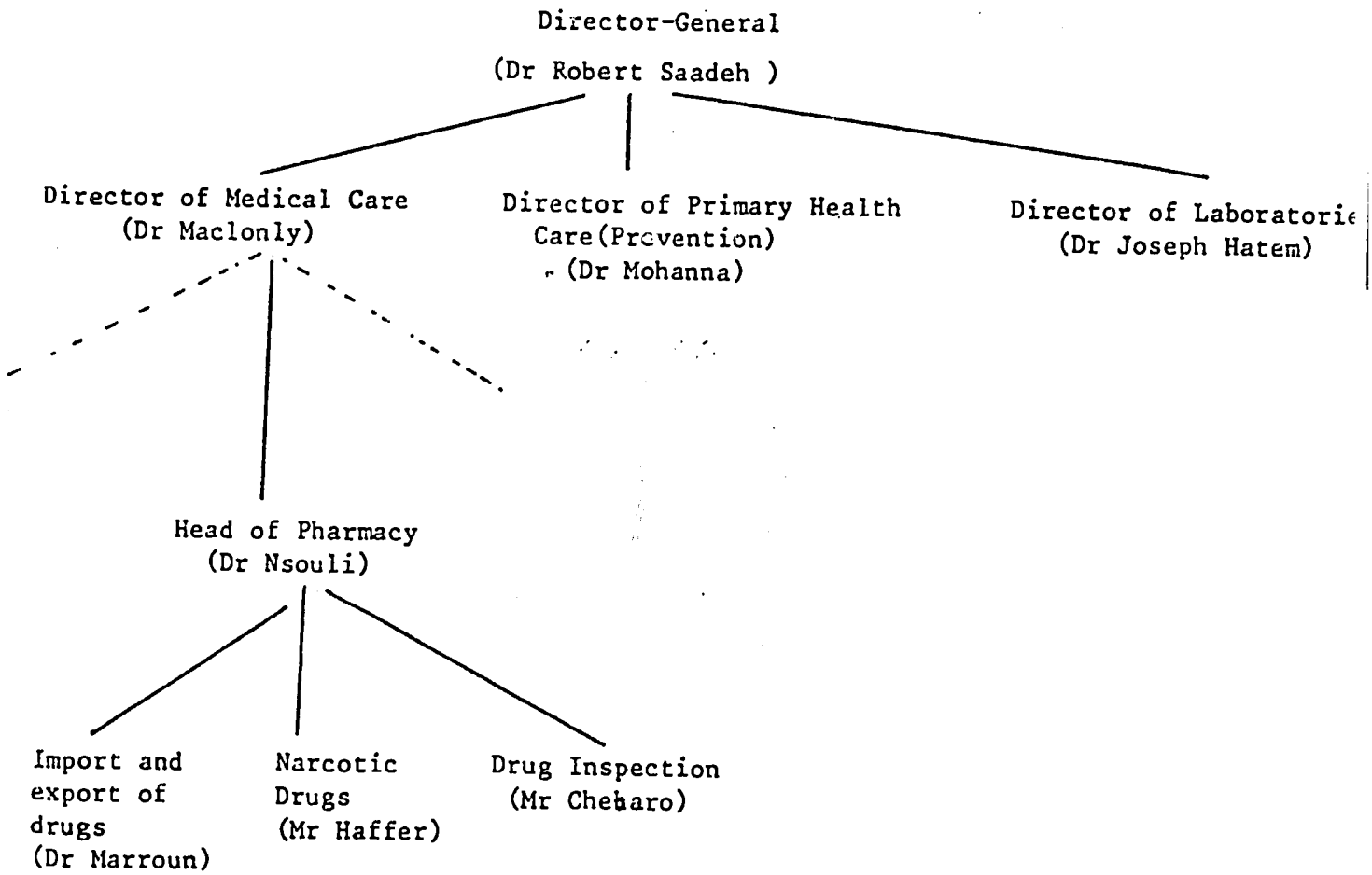
WHO/LRCS Health Sector Assessment and Planning Mission to Lebanon

1. REVIEW AND ASSESSMENT OF THE CURRENT SITUATION

1. REVIEW AND ASSESSMENT OF THE CURRENT SITUATION

Structure and Function of the drug regulation and inspection services of the Government of Lebanon

The drug regulatory and drug inspection services in Lebanon are the responsibility of the Department of Pharmacy within the Ministry of Health. The organizational chart of the Department and its position within the Ministry of Health is shown below.



The Head of the Department of Pharmacy - Dr Nsouli, is supported by the three section heads with their support personnel. Detailed discussions were held with Dr Maroun, Mr Cheharo and Dr Nsouli regarding the nature and scope of their responsibilities, the problems and constraints they are facing and the mechanisms needed to overcome these problems.

Registration of New Drugs

Whenever an application is made by a licensed agent or pharmacist to register a new drug in Lebanon this application needs to be made in a regular form entitled "Information and Documents demanded from foreign manufacturers

of pharmaceutical specialities"

The manufacturer needs to supply information about the pharmaceutical concern, has to supply all scientific information about the drug, include results of all clinical trials carried out with the drug by the pharmaceutical house in different countries with the collaboration of clinical investigators, provides the Department with the results of the pharmacokinetic studies, the stability data of the drug, a sample of the drug together with its package insert.
If some information is not available in the documentation, it is asked for before the particular drug is considered by the Registration Committee of New Drugs.
The pharmaceutical concern has to specifically state whether the drug is released for use in the country of manufacture.

I was informed that,if the drug was not being marketed or approved for use in the country of origin, it was not considered further for registration in Lebanon.

Committee for Registration of New Drugs

This Committee is responsible for approving registration of new drugs in Lebanon. This Committee meets approximately two weeks. The composition of the Committee is given below:

Director General, Ministry of Health	-	Dr Robert Saadeh
Chief of Inspection, Ministry of Health	-	Dr Husni Cheharo
Order of Physicians	-	Dr Nadim Kortas
		Dr Sobhi Jermanos
Order of Pharmacists	-	Dr Labib Atik
	-	Dr Cloud Loutfi
Ministry of Health	-	Dr Ahan Marroun

I was fortunate to meet the Committee and had prolonged discussions both jointly and individually. The criteria adopted by the Committee for considering whether the drug should be registered in Lebanon are:

(a) Safety of the Drug

(b) Efficacy of the Drug

(c) Whether the Drug is released in the country of origin, and

(d) Whether there is need for another drug of that type in the country

The Committee are attempting very hard to keep down to a minimum the new drugs that could be registered. Since 1981, the Committee has allowed registration of only 40 drugs. If the Committee is unable to decide on the advisability of registering a particular drug, expert opinion is sought from the American University of Beirut or Hotel Dieu experts.

Price Fixation Committee

The Committee for Registration of New Drugs also fixes the price of the drug being sought to be registered. On the F.O.B. price of the drug:

7.5% is added for freight

7.0% for Customs, Insurance and port fees

10.0% for the Importer, and

30.0% added for the Pharmacy

Thus the rise in the price of a drug with a F.O.B. value of 100 is shown below:

100	+ 7.5%	--->	107.5	(freight - 7.5%)
107.5	+ 7%	--->	115	(Customs, Insurance and Port fees - 7%)
115	+ 10%	--->	126.5	(Importers or Profit - 10%)
126.5	+ 30%	--->	164.45	(Pharmacists' profit - 30%)

Fees to be paid by the agent

A fee of Pounds Ten (non refundable) has to be paid by the agent when requesting registration of the drug. If the Pharmacy Department authorities or the Committee for Registration of Drugs feel the need for getting an analysis of the sample carried out in a good laboratory, the agent has to pay for getting

the drug analyzed. The Committee have a list of laboratories which will carry out the tests and send their report to the agent.

It was pointed out all the time by the Committee members and the Director-General, that, not having any Drug Quality Assurance Laboratory in the country, was a great handicap and constraint. They are not able to get, except for a very few, any samples of drugs analyzed here at the Drug Laboratories Section of the Central Public Health Laboratories in the range of tests required. On several occasions, it was pointed out that assistance for development of these facilities would greatly assist the Committee and the Department of Pharmacy to carry out the mandate given to them. The same constraint was mentioned later again by the Head of the Inspection Services in the context of his section's functioning. Samples which his unit suspect are substandard or illegal - not registered, substandard or illegally presented under a false brand label, cannot be tested in Lebanon or outside the country for lack of funds for outside testing and this hampered his unit's programme of work in attempting to ensure the safety and efficacy of the drugs on the market. Since this need was repeatedly brought up, it is discussed here and will only be referred to again when this report deals with the Central Public Health Laboratories.

Pricing of Drugs already on the market

A recently formed committee has the mandate of looking into the prices of drugs already on the market. The Committee consists of Dr Nsouli, Mr Cheharo an Dr Marroun - all from the Department of Pharmacy. This Committee is just at the moment discussing the guidelines to be followed by them.

Import of generic drugs

Import of generic drugs are usually carried out in response to tender enquiries. Since the last two years the importer has to show to the drug control authorities a certificate from the official authority in the country of production indicating that the Government confirms that the general drug has been produced according to the good manufacturing practices code. This is in accordance with the WHO Certification Scheme. Unfortunately permission

prior to two years has been given by the Government to importers to import generic drugs without showing this certificate. This, it is felt by the authorities, may have led to many generic drugs of a substandard quality being brought into the country and being sold under false brand names.

Drug Inspection

The Chief of the Drug Inspectorate Section of the Department of Pharmacy is assisted by eleven Inspectors. This visit is responsible for ensuring that no illegal or substandard drugs are sold on the market and that proper pharmaceutical practices are observed by importers and retailers.

Number of pharmacies, importers, agents and manufacting firms in Lebanon

In Lebanon there are 616 pharmacies, 95 importers of finished product drugs, 7 manufacturing units and a handful of importers of generic drugs. Of the 616 pharmacies, 296 are legally licensed pharmacies while there are 320 "illegal" pharmacies. "Illegal" pharmacies are those pharmacies that started selling drugs after 1954 when no more licenses were given by the Government. These started to function without licenses and are "illegal" for several reasons. One reason mentioned after was that the present law specifies a distance to be mentioned between pharmacies and these pharmacies do not maintain this distance and are therefore illegal. The Government is not clear as to what can be done to these pharmacies now. Since they are supplying a need it will not be possible to close them down. There are 1125 pharmacists in the country.

Of the 17 manufacturing firms, two have very good facilities. These are

(a) Middle East Pharmaceutical and Industrial Company S.A.L. which formulates a wide range of Ciba Geigy drugs, and

(b) Frost and Company which produces a range of Merck, Sharpe and Dohme products.

Both these manufacturing units also have a large range of their own products.

I have seen one of these and was impressed by the quality control facilities available, the tests being carried out and the calibre of the personnel. I understand that the second is also of the same order. I understand that standards of production and quality control are not the same in the other fifteen manufacturing units which are much smaller units.

Inspection Schedule of Pharmacies

The team of eleven inspectors check each of the legal pharmacies every two months. During the checking, the following are observed:

(a) Presence of pharmacist
(b) Shelf life of drugs - expiry dates
(c) Examination of all drugs sold e.g. is the drug registered, does it have a batch number, how does the quality appear on visual examination, what about the carton...
(d) The expiry date on sachets of antibiotics are checked
(e) The storage facilities and storage of perishable items such as insulin, vaccines, I.V. solutions are checked.
(f) The shelf life of powdered milk and baby food is also checked.

If it is suspected that some of the drugs are illegal, a sample is taken for analysis. The lack of adequate facilities for quality testing of drugs acts as a break to inspection activities. It may be that the drug entity is all right but the packing is false. In these cases, the pharmacist is held responsible. If the drug has been imported by an importer, he and the pharmacist who sells the drugs are held responsible. If the importer denies importing the drug, then the pharmacist is held solely responsible.

Sale of Illegal Drugs on the Market

The Government and the public are seriously concerned about illegal drugs being sold on the market. They have requested for assistance in overcoming this problem.

A look into the problem and discussion with a wide range of persons involved in control, import, manufacture and selling of drugs indicates that there are several ways in which illegal drugs find their way into the market:

(1) The drug, often of inferior quality, perhaps past the expiry date, is just smuggled into the country and finds its way into the shelves of the pharmacist

(2) Substandard drugs may be produced in areas not totally under drug inspection control of the Government and these again are found on the market.

(3) Sometimes generic drugs imported into the country legally are misused at some level, put into cartons of reputed brand names, also illegally produced and sold on the market.

During my visit to the Ministry of Health, a sample of Bactrim was brought in. This sample was collected by an inspector as he suspected it was illegal. It was in a carton purporting to be that of Roche. There was no expiry date but there was a batch number on the carton. This information was sent to Roche - Basle who confirmed that the batch number indicated that the drug had been produced by Roche in Turkey but that it had been produced seven years ago. Obviously all expired cartons of the drug had been smuggled into Lebanon from Turkey.

There are no easy solutions to this problem but, as will be seen in the recommendations to follow, a combination of:

(a) providing immediately facilities to the Ministry for testing the quality of drugs
(b) strengthening of the Inspectorate visit of the Ministry of Health, and
(c) amending and strengthening the existing Drug Legislation will improve the situation.

Since the last two months, the Inspection Visit is insisting that all drugs exhibit a label which indicates the batch number, date of expiry and the price for the public. All drugs not exhibiting this label would render the pharmacist liable to prosecution. In several pharmacies I noticed this label and , if this rule is strictly enforced this will certainly improve the position. However, as of now, many drugs in the pharmacies I have visited did not also have this label. It must, however, be stated that the move made by the Chief of the Inspectorate Section and his staff is a commendable one and needs now to be enforced.

Drug Analysis Section of the Central Public Health Laboratories

The Drug Analysis Section of the Central Public Health Laboratories (Dr Hatem) had, before the war, been carrying out analyses of several drugs. The WHO Regional Office at Alexandria had provided consultant support and fellowships to the drug analysis section. At least three staff members had been awarded fellowships for training in quality control of drugs.

The laboratory was damaged badly during the war and a lot of equipment is kept together in one room and probably cannot be used again. The other pieces of equipment, not apparently damaged, are also not working. The laboratory authorities are taking steps to see what damage has been caused by the shelling.

This laboratory is the major facility of the Government in the area of investigational sciences. The Government have now proposed that a National Drug Quality Assurance Laboratories be established as part of this laboratory. Space is available as also the other facilities that will be shared by all the departments e.g. stores, administration services, animal facilities, etc. The organizational chart of the proposed new laboratory was discussed with the Director, his staff and the WHO Consultant now working at the laboratories, Dr Gatti. The Chief of the Inspection Unit of the Ministry of Health and Dr Katras, a member of the Task Force on Drugs was also present at the discussion. All these persons felt that it would be appropriate to house the National Drug Quality Assurance Laboratories at this centre.

One of the problems that will be faced will be the question of manpower. The only staff left in the Drug Analysis Section is one pharmacist, trained by

WHO in quality control procedures and one technician. The rest had left during the war. This issue was discussed with the Director of the Laboratories, Dr Hatem, who felt that manpower was not a problem in Lebanon and that, if equipment and supplies were provided by WHO, he would have no problem finding suitable persons to work in the laboratories.

WHO is executing already a UNDP project on further development of central facilities at Beirut and development of regional laboratory facilities at four regional centres. A WHO Consultant is in position, but disturbed conditions since his arrival have slowed down his programme of work.

Drug Legislation

There is legislation on all aspects of pharmaceutical import, manufacturing, sales, price fixation and drug inspection. I have been given legislation pertaining to Pharmaceutical Laws, Price Fixation of Drugs, Manufacturing Laws, etc. However, these laws were formulated around 1950 and it was felt by most persons that the laws need revision, strengthening and updating. There appeared to be a consensus on this and this is being considered in the recommendations.

Number of Drugs on the Market

The exact number of drug entities available on the market in Lebanon is perhaps around 6 000 but this is a guesswork figure. The actual figure is not known. When the last Index was compiled of registered drug entities on the market in 1970, the number appeared to be around 2000. Some persons in the field put the number as high as 16,000 preparations while still others say it is between 8000 and 12.000 preparations. This does not include the very many types of drugs from very many different sources from many different countries during the war and after the war as aid. The Government are very interested in carrying out a study to make an inventory of all the drugs on the market.

They have already prepared a plan for carrying this out and publishing a computer printout.

There is, of course, an immediate need for this as reduction in the number of drugs tobe used in the country and preparation of lists of essential drugs for different levels of health care including primary health care, can only be carried out after it is known as to how many drugs are on the market. The drugs beyond the 2000 number in 1970 are not registered. They would need to be registered after an inventory control is made. This is dealt with further in the recommendations on the computerized drug formulary project.

The number of drugs used by the private sector are definitely on the high side. The American University of Beirut has a Drug Formulary that runs to about 2000 preparations.

Drugs'Purchase and Distribution for the Public Hospitals

The Central Stores Depot procure, by asking for yearly tenders, drugs that are then stored in the Central Drug Stores (one Chief Pharmacist supported by eight others) and distributed to the Government hospitals in the country. Site visits to the Government hospitals indicated that, in general, there were adequate numbers and types of drugs. There were, of course, instances of unusually long delays in replenishment of the drugs but in the present conditions that things were not worse was a pleasant surprise. The Stores procure about two entities which are very close to the WHO List of Essential Drugs by generic names and then supply these to the public sector hospitals. The list of drugs procured and supplied by the Depot is enclosed. On questioning, both at the stores and at the hospital dispensaries I learnt that drugs not being utilized in time and passing the expiry date , was not a significant problem.

Similarly, there appeared to be adequate drugs in the one dispensary that the team visited on their way to Tyre after leaving Saida. These drugs are given to the dispensaries by donation from private organizations in addition to supply from the Ministry

Enclosure A lists the drugs supplied by the Central Depot and the drugs found in the one dispensary visited between Saida and Tyre. The list of drugs supplied to all public hospitals is available.

Task Force on Drugs - WHO Programme on Drugs

The Government have recently formed a Task Force on Drugs. The aims and objectives of this Task Force are the same as the WHO Programme on drugs. The Task Force programme of work and deliberations were shared with me by Dr N.Kartas of the Department of Pharmacology of the American University of Beirut and Mr H. Cheharo - both members of the Task Force . The Task Force is very interested in determining the number of drugs on the market and then in reducing the number of entities that need to be distributed by the governmental channels. The group are also very conscious of the lack of drug quality control laboratory facilities in the country and have identified establishing such a centre as a priority need. Finally the Task Force is very concerned at the prices of drugs on the market and are making efforts to reduce this. It is very heartening to see that the priorities of the Task Force on Drugs and the WHO Programme on Drugs are almost identical and have the same priorities. This agrees well for future collaborative efforts between WHO and the Government of Lebanon in the field of drugs.

Cost of Drugs - Formation of an autonomous drug agency

The Minister of Health, the Director General of Health Services, the AUB Bains Trust led by Dr N.Kronfol, the Pharmacy Department at the Ministry of Health are all concerned at the high prices of drugs and want that the prices of drugs be reduced. Particularly unacceptable to them is the fact that prices of the same drugs are cheaper in Syria and Jordan. It was asked, for example, as to why the same pharmaceutical concern has different prices for the same drug in the same packing in different packings. The national authorities are fully aware, and brought this to our attention that the number of pharmaceutical import agents, number of pharmaceutical products are much more in Lebanon than in Jordan and Syria and this results in unnecessary use of unnecessary

agents leading to an increase in cost. However, reduction in the number of entities to be used in Lebanon will take a long time and it may not be possible for the Government to reduce the number of pharmaceutical import agents and pharmaceutical companies. The comparative figures are shown below:

Country	No. of Pharmaceutical Importing Agents	No. of Pharmaceutical Companies	Number of Pharmaceutical products on the market
Lebanon	89	488	12,000
Syria	Govt.(2)	196	3,000 (1970)
Jordan	36	189	2,538 (1979)

The Government have therefore taken the bold and decisive decision in their efforts to reduce the cost of drugs on 13 January 1983, to establish by decree, an autonomous Office of Drugs/National Drug Agency under control of the Minister of Health, that will be responsible for the import, export, purchase, selling distribution and manufacture of drugs in the country. The Agency would be headed by the President of the Executive Council of the Agency who will be a Ph.D. in Pharmacy, Medicine or Business Management. He would be a full time employee. The other members of the Council will be two from the Department of Social Security, representing the Employers and Employees, and two others designated by the Minister of Health with degrees in Law and Economics. There will be another government official nominated by the Minister of Health.

There will be a Technical Committee to assist the Drug Agency. This Committee will consist of:

(a) A Professor of Pharmacology from each of the two universities
(b) A Representative of the Ministry of Health, Head of Pharmacy Department
(c) Representative of the Social Security Council - Head of Pharmacy Departm
(d) Representatives of each Syndicate of Physicians - i.e. two persons
(e) Representatives of the Syndicate of Pharmacists - 2

Each of the members should be either an M.D. or a licensed pharmacist in Lebanon. They should not be concerned, in any way, in business with drugs.

The Technical Committee will:

(a) Select drugs and pharmaceutical products for use in therapy and aneasthesia that should be imported, exported or manufactured in Lebanon. Their decision on these matters are binding on the Executive Committee.

(b) Lay down conditions for calling tenders and the general conditions of purchase.

(c) Check if the drugs received conform to the technical specifications laid down

(d) Review lists of drugs,whenever necessary,but at least once a year

The Executive Committee will be assisted by appropriate administrative and support staff. The conditions of service etc. will be specified in a decree taken by the Central Cabinet on the recommendations of the Minister.

There are other points mentioned in the decree relating to audit of the accounts of this Office of Drugs, the policy to be laid down for pricing the drugs, which could be studied in the copy of the original decree attached with this report.

However, two other points of importance need to be mentioned here. The Office of Drugs/National Drug Agency will be granted a loan, as soon as the activity starts, on the recommendation of the Ministers of Finance and Health. This loan will be repaid according to the current laws. Finally, this organization is not entitled to sell drugs or pharmaceuticals directly to the public except in emergencies which will be decided by the Council of Ministers.

This decree became effective on 13 January 1983 and exempts the working of the office from the regulations from two earlier decrees: No. 6474 dated 16 January 1967 and No. 4517 dated 13 February 1972 which conflicts with some of the things stated in the present decree. It also exempts this decree from the regulations in Decree No. 114 dated 12 June 1969 which also conflicts with this decree and also Decree 34/67 concerned with representation of commercial products in the country.

One of the points raised by representatives of manufacturers of drugs was whether WHO could assist them to obtain certificates of following good manufacturing practices as it is difficult for them to obtain such certificates locally from the Government due to the difficult situation that had prevailed in the country for the last decade. The export of drugs, particularly to the Gulf countries had declined and, in this new place, they would like to export their products. They would welcome inspection by WHO or any organization that could see the conditions prevailing, make recommendations for improvement if needed and assist in their obtaining the certificate necessary for exporting drugs.

ENCLS: Enclosure A: Drugs list at a dispensary between Saida and Tyre
Copy of the Decree in Arabic

ENCLOSURE A

DRUGS LIST AT A DISPENSARY BETWEEN SAIDA AND TYRE

Promethazine

Ativan

Phenerform

Tetracycline

Litrison

Mexaform

Primperm

Klion

Penicillin

Bactrin

Inderal

Multivite

Kavefenin

Berlictim

Forlife

Tetralysol

B. Complex

Baralgin Ampoules

Nitrofurantoin

Reserpine

Aspirine

Dolobiol

Niclosamide

Lasix

Sponslor

Diazepan

Marlow

Pendocellin

Prednisolone.

وزارة الصحة العامة

قانون رقم ٥/٨٣

اقر مجلس النواب ،

وينشر رئيس الجمهورية القانون التالي نصه :

مادة وحيدة : صدق مشروع القانون المتعلق بالغاء قانون انشاء المكتب الوطني للادوية والاستعاضة عنه باحكام جديدة والمحال الى مجلس النواب بموجب المرسوم رقم ٤٤٢٤ تاريخ ١٩٨١/١٠/٢٠ كما عدلته اللجان النيابية المشتركة ·

ويعمل بهذا القانون فور نشره ·

بعبدا في ٥ كانون الثاني سنة ١٩٨٣

الامضاء : امين الجميل

صدر عن رئيس الجمهورية
رئيس مجلس الوزراء
الامضاء : شفيق الوزان

وزير الصحة العامة
الامضاء : عدنان مروه

قانون

الغاء قانون انشاء المكتب الوطني للادوية والاستعاضة عنه باحكام جديدة

المادة الاولى ـ الغي مشروع القانون المعجل الموضوع موضع التنفيذ بموجب المرسوم رقم ٣١٩٧ تاريخ ١٩٧٢/٥/١٣ (انشاء مكتب وطني للادوية) واستعيض عنه بالاحكام التالية ·

المادة الثانية ـ تنشأ مؤسسة عامة ذات طابع تجاري وصناعي ، يدعى « المكتب الوطني للادوية »وتعرف فيما يلي«بالمكتب»·

ـ يتمتع المكتب بالشخصية المعنوية والاستقلالين الاداري والمالي ، ويخضع لوصاية وزير الصحة العامة ·

ـ لا تخضع اعمال المكتب الا لرقابة ديوان المحاسبة المؤخرة والتفتيش المركزي ، ولاحكام هذا القانون ، والانظمة التي توضع تنفيذا لهذه الاحكام ·

ـ يتولى المراقبة المالية ، مراقب يعين بقرار من وزير المالية ، وتحدد صلاحياته ومهامه في النظام المالي المنصوص عليه في المادة الثامنة من هذا القانون ·

المادة الثالثة ـ مهمة المكتب استيراد وتصدير وشراء وبيع وتصنيع الادوية الوارد بيانها في قانون مزاولة مهنة الصيدلة ·

يتكون المكتب من :

ا ـ مجلس تنفيذي

ب ـ هيئة علمية

المادة الرابعة ـ يتكون المجلس التنفيذي من رئيس متفرغ حائز على دكتوراه في الصيدلة او الطب او ادارة الاعمال على الاقل ، تتوفر فيه الشروط القانونية للتعيين يتولى وظيفة مدير عام المكتب ومن اربعة اعضاء ، منهم حكما عضوان عن مجلس ادارة الصندوق للضمان الاجتماعي ، يمثلان اصحاب العمل والاتحادات العمالية والعضوان الاخران من الحائزين على اجازة جامعية بالقانون او الاقتصاد ·

يعين رئيس واعضاء المجلس التنفيذي بمرسوم يتخذ في مجلس الوزراء بناء على اقتراح وزير الوصاية ·

يمثل سلطة الوصاية لدى المكتب ، مفوض حكومة يعين وتحدد صلاحياته بمرسوم بناء على اقتراح وزير الصحة العامة ·

المادة الخامسة ـ ١ ـ تتالف الهيئة العلمية على الوجه التالي ، ويتم تشكيلها بمرسوم بناء على اقتراح وزير الصحة العامة ·

ـ استاذ من كل معهد من معاهد الطب في لبنان يدرس علم فعالية الدواء (فارماكولجيا) .

ـ مندوب عن وزارة الصحة العامة (رئيس مصلحة الصيدلة) .

ـ مندوب عن الصندوق الوطني للضمان الاجتماعي (الصيدلي المسؤول) .

ـ ممثل عن كل من نقابتي الاطباء في لبنان .

ـ ممثلان عن نقابة الصيادلة في لبنان.

٢ ـ يشترط في كل من اعضاء الهيئة ان يكون من الاطباء او الصيادلة اللبنانيين المجازين من قبل وزارة الصحة العامة .

٣ ـ لا يجوز ان يكون هؤلاء الاعضاء من تجار الادوية او اصحاب او مستخدمي او وكلاء الشركات التي تتعاطى صناعة او تجارة الادوية والمستحضرات الطبية والجراحية كما لا يجوز ان يكونوا شركاء او مستخدمين باي شكل ، في مثل هذه الشركات او يملكوا اسهما فيها .

المادة السادسة ـ تتولى الهيئة العلمية درس وتقرير الامور التالية :

١) اختيار الادوية والمستحضرات الصيدلانية والمواد الكيمائية المستعملة للتخدير او العلاج التي يحق للمكتب شراؤها او استيرادها مباشرة من الخارج . او تصنيعها او تصديرها . ويكون قرارها ملزما للمجلس التنفيذي .

٢) درس اي موضوع يتعلق بالادوية يعرض عليها من قبل رئيس المجلس او وزير الوصاية .

٣ ـ ابداء الراي الفني في دفتر الشروط المتعلق بشراء الادوية .

٤ ـ التحقق عند الاستلام النهائي فيما اذا كانت الادوية المسلمة مطابقة للمواصفات الفنية .

٥) اعادة النظر في جداول الادوية ومراجعتها ، كلما دعت الحاجة الى ذلك وعلى الاقل مرة واحدة في السنة .

المادة السابعة ـ يعاون المجلس التنفيذي جهاز اداري يحدد ملاكه وسلسلة رتب ورواتب العاملين فيه ، وشروط وطريقة تعيينهم ، بمرسوم يتخذ في مجلس الوزراء بناء على اقتراح وزير الوصاية .

المادة الثامنة ـ يضع المجلس التنفيذي نظام المكتب الداخلي ونظام المستخدمين والنظام المالي الذي يحدد القواعد المالية والمحاسبة المعتمدة وفقا للعرف التجاري .

ولا تصبح هذه الانظمة نافذة الا بعد التصديق عليها بمراسيم بناء على اقتراح وزير الصحة العامة .

المادة التاسعة ـ تعفى من جميع الضرائب والرسوم الجمركية الاعمال التي يقوم بها المكتب في تنفيذ مهمته .

المادة العاشرة ـ يخضع استيراد وتصدير وبيع وتصنيع المستحضرات الطبية ، لاحكام قانون مزاولة مهنة الصيدلة .

المادة الحادية عشرة ـ تحدد اسس التسعيرة في النظام الداخلي ، بطريقة تؤمن توازن النفقات والواردات مع تكوين مال احتياط على ان لا يزيد عن خمسة بالمائة عن الراسمال تخصص للاستهلاك ويحدد السعر الرسمي الافرادي بقرار من وزير الصحة العامة ، بناء على اقتراح المجلس التنفيذي .

المادة الثانية عشرة ـ ا ـ لتمكينه من ممارسة نشاطه يمنح المكتب فور العمل بهذا القانون سلفة خزينة بناء على اقتراح وزيري المالية والصحة العامة ، بعد موافقة مجلس الوزراء .

[illegible] وفقا للاصول المنصوص عنها في المادة ٢٠٩ من قانون المحاسبة العمومية .

ب - يضع المكتب ميزانيته وموازنته السنوية ، وتصدق بقرار من وزيري الصحة العامة والمالية .

المادة الثالثة عشرة - لا يجوز للمكتب ان يبيع الادوية والمستحضرات الطبية من العموم مباشرة ، الا في الحالات الطارئة التي يعود امر تقديرها لمجلس الوزراء .

المادة الرابعة عشرة - لا تخضع اعمال المكتب لاحكام المرسومين رقم ٦٤٧٤ تاريخ ٦٧/١/١٦ ورقم ٤٥١٧ تاريخ ١٩٧٢/١٢/١٣ ولا لاحكام المرسوم الاشتراعي رقم ١١٤ تاريخ ١٩٥٩/٦/١٢ التي تتعارض مع احكام هذا القانون وكذلك اعمال المكتب لاحكام المرسوم ٦٧/٣٤ المتعلقة بالوكالة والتمثيل التجاري على عملية استيراد الدواء من قبل المكتب .

المادة الخامسة عشرة - تحدد دقائق تطبيق احكام هذا القانون وصلاحيات المجلس التنفيذي بمراسيم تتخذ في مجلس الوزراء ، بناء على اقتراح وزير الصحة العامة .

المادة السادسة عشرة - يعمل بهذا القانون فور نشره في الجريدة الرسمية .

مراسيم اشتراعية

مرسوم اشتراعي رقم ٢

اجازة ابرام البروتوكول المتعلق بالتعاون المالي والفني بين الجمهورية اللبنانية والمجموعة الاقتصادية الاوروبية

ان رئيس الجمهورية
بناء على الدستور

بناء على القانون رقم ٨٢/٣٦ تاريخ ١٩٨٢/١١/١٧ (منح الحكومة حق اصدار مراسيم اشتراعية)

بناء على المرسوم الاشتراعي رقم ٩ تاريخ ١٩٣٩/١١/٢١ (تعيين الموعد الذي تصبح فيه القوانين والمراسيم نافذة) .

وبعد استشارة مجلس شورى الدولة

بناء على اقتراح وزير الخارجية والمغتربين

وبعد موافقة مجلس الوزراء بتاريخ ١٩٨٢/١٢/٢٢

يرسم ما ياتي :

المادة الاولى - اجيز ابرام البروتوكول المتعلق بالتعاون المالي والفني بين الجمهورية اللبنانية والمجموعة الاقتصادية الاوروبية والموقع في بروكسل بتاريخ ١٧ حزيران ١٩٨٢ .

المادة الثانية - يعمل بهذا المرسوم الاشتراعي في اليوم الثاني لنشره لصقا على مدخل مقر رئاسة الحكومة .

علق على مدخل مقر رئاسة الحكومة بتاريخ ١٩٨٣/١/٦

بعبدا في ٥ كانون الثاني سنة ١٩٨٣
الامضاء : امين الجميل

صدر عن رئيس الجمهورية
رئيس مجلس الوزراء
الامضاء : شفيق الوزان

وزير المالية
الامضاء : عادل حميه

وزير الخارجية والمغتربين
الامضاء : ايلي سالم

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2. RECOMMENDATIONS

2. RECOMMENDATIONS

2.1 Support to national programme for ensuring the safety and efficacy of essential drugs in Lebanon.

2.1.1 Establishment of National Drug Quality Assurance Laboratories, Beirut

2.1.2 Strengthening of the Drug Inspectorate Section of the Ministry of Health, Government of Lebanon

2.1.3 Amendment and Strengthening of existing drug legislation

2.2 Support to national drug policy formulation and development of a national formulary

2.2.1 National Policy Statement on Drugs

2.2.2 Inventory and Registration of all drugs now available and being used in Lebanon

2.3 Support to national efforts to reduce the price of drugs and decrease unnecessary use of drugs.

2.3.1 Establishment of a National Drug Agency for procurement, storage and distribution of essential drugs

2.3.2 Studies on drug utilization

2.3.3 Dissemination of objective information about rational use of drugs.

2.1 Support to national programme for ensuring the safety and efficacy of essential drugs in Lebanon

2.1.1 Establishment of National Drug Quality Assurance Laboratories, Beirut

It is recommended that assistance be provided to the Government of Lebanon for their proposal for establishment and development of the National Drug Quality Assurance Laboratories as part of the activities of the National Public Health Laboratories. WHO had already provided assistance towards development of the chemical assay laboratories of the National Public Health Laboratories in the past but nearly all that had been achieved has been destroyed by the recent war. The proposed laboratory will have the capability of analyzing quantitatively and qualitatively approximately one hundred priority or essential drugs (Annex I), will be in a position to carry out general pharmacological and acute and subacute toxicity studies of drugs and also analyze the content of narcotic and psychotropic drugs as required for medicological purposes. There will be potentialities for development of a continued activity at the laboratories for functioning also as the laboratories of a Poison Central Centre. It is hoped that the Government of Lebanon will take steps to create the staff positions planned for the National Drug Regulatory Laboratories, Beirut.

The list of drugs that would be analyzed is shown in Annex I. The laboratories, as planned, will consist of four sections: Chemistry; Microbiology and Biochemistry; Pharmacology and Toxicology and Narcotics Assay. Each section will be headed by a scientist with an M.S. degree supported by a staff, initially, of two technical assistants (B.S. level) and two technicians. The organogram is shown in Annex II. The laboratories will be headed by a scientist - Ph.D. level, with experience in analyses of drugs.

The WHO Regional Office at Alexandria already has embarked on a programme of development of a network of drug quality assurance laboratories in the region. Such laboratories have been developed or are in stages of being developed at Amman, Kabul, Khartoum and Muscat. WHO had provided consultant assistance and support for fellowships (four in recent years) to the Government of Lebanon in their endeavour in this field which unfortunately have had to undergo the sad experience of war.

It is recommended that support in this collaborative venture be provided in the form of:

A) Supplies

1. Equipment with spares: (List attached for all three years 1983, 1984 and 1985 - Annex III).
2. Chemicals and Reagents : List to be prepared

B) Consultant assistance

1983 : 1) 3 months consultantship in Chemical Analysis
2) 3 months consultantship in Microbiological and Biochemical Analysis

1984 : 1) 3 months consultantship in Chemical Analysis
2) 3 months consultantship in Microbiological and Biochemical Analysis
3) 3 months consultantship in Pharmacology and Toxicology

1985 : No consultancy needed.

C) Training Courses and Fellowships

1983: 1) 2 fellowships for six months duration to be provided to two persons.

1984: 1) 1 fellowship to be provided for six months
2) 1 training course to be organized at Beirut

1985: 1) 1 fellowship to be provided for six months
2) 1 Training Course to be organized at Beirut

Budget Estimates for all the years 1983, 1984 and 1985

A) Supplies

1.	Equipment with spares	- 300,000.00 US Dollars
2.	Chemicals and reagents	- 75,000.00 US Dollars
3.	Consultant Assistance	- 15 man months
4.	Fellowships	- 24 man months
5.	Training courses (2)	- 10,000.00 US Dollars (approx.)

It is expected and hoped that the facilities established will be available for maximal use by all institutes and scientists interested in carrying out research and training activities in the field of drug assay, pharmacokinetics, clinical pharmacology, clinical pharmacy and other related areas and that suitable arrangements for this will be made by the authorities of the Central Public Health Laboratories and the National Drug Quality Assurance Laboratories.

Immediate Programme for assisting the Government for carrying out analyses of drugs

It will take approximately two years for the Drug Control Laboratories to be in a position to carry out all the analyses required for all the drugs. The authorities, however, require immediately to know about the quality of four categories of pharmaceuticals:

(a) drugs being sought to be imported into the country - the quality of which national authorities are dubious about,

(b) generic drugs being sought to be imported into the country,

(c) drugs appearing and being sold on the market which appear to be illegal drugs - not registered, substandard or illegally presented under a false brand label,

(d) drugs randomly collected for analysis of quality.

It is recommended that, along the lines being organized for other countries in the Region, WHO organizes a programme whereby 1000 samples each in the years 1983 and 1984 and 500 in 1985 are analyzed at a selected Drug Quality Control Laboratory in other parts of the world. The National Drug Laboratories at Upsala, Sweden, the British Pharmacopoea Laboratories, London, and other similar laboratories would be sent samples from Lebanon for analyses of their contents.

It is proposed that the following budget be allocated for this programme:

1983	-	10,000.	US Dollars
1984	-	10,000	US Dollars
1985	-	5,000	US Dollars
Total	-	25,000	US Dollars

Annex IV lists the laboratories where the analysis of drugs, stated in Annex II, could be organized if this recommendation is approved and funded.

ANNEX I

DRUGS THAT WOULD BE ANALYZED AT THE DRUG CONTROL LABORATORIES, BEIRUT

Acetyl salicylic acid

Phenyl butazone and oxyphenobutazone

Indomethacin

Phenobarbitone

Allopurinol

Ibuprofen

Pentazocine

Paracetamol

Lidocaine

Phenoxymethyl penicillin, Benzyl penicillin

Streptomycin

Chloromycetin

Erythromycin

Tetracycline, oxytetrocycline, doxycycline

Nystatin

Carlienecillin

Cephaloridine

Nitrofurantoin

Gentamycin

Lincomycin

Ampicillin

Sulfamethazole

Trimethoprim

Rifampicin

Lithium carbonate

Tobramycin

Sulfacetamide

Sulfadimidine

Aminophylline

Digitalis

Heparin

Reserpine

Methyl dopa

Hydrochlorothiazide

Spirinolactone

Propranalol

Aluminium hydroxide

Atropine

Cimetadine

Cortisone and Hydrocortisone, Prednisone and Prednisolone

Chlorproppanide

Insulin

Oestradiol

Progesterone

Tollintamide

Isoproterenol

Piperazine

Chloroquin

Metronidazole

Chlorpromazine

Meprobamate

Imipiramine

Diazepam

Thiamine

Ascorbic Acid

Ergometrine

Vitamin 12

Pyridoxine

Vitamin A

Vitamin B6

Folic Acid

Iron

Niacinamide

Choline chloride

D - 3

Chlorpheniramine

Epinephrine

Pethidine

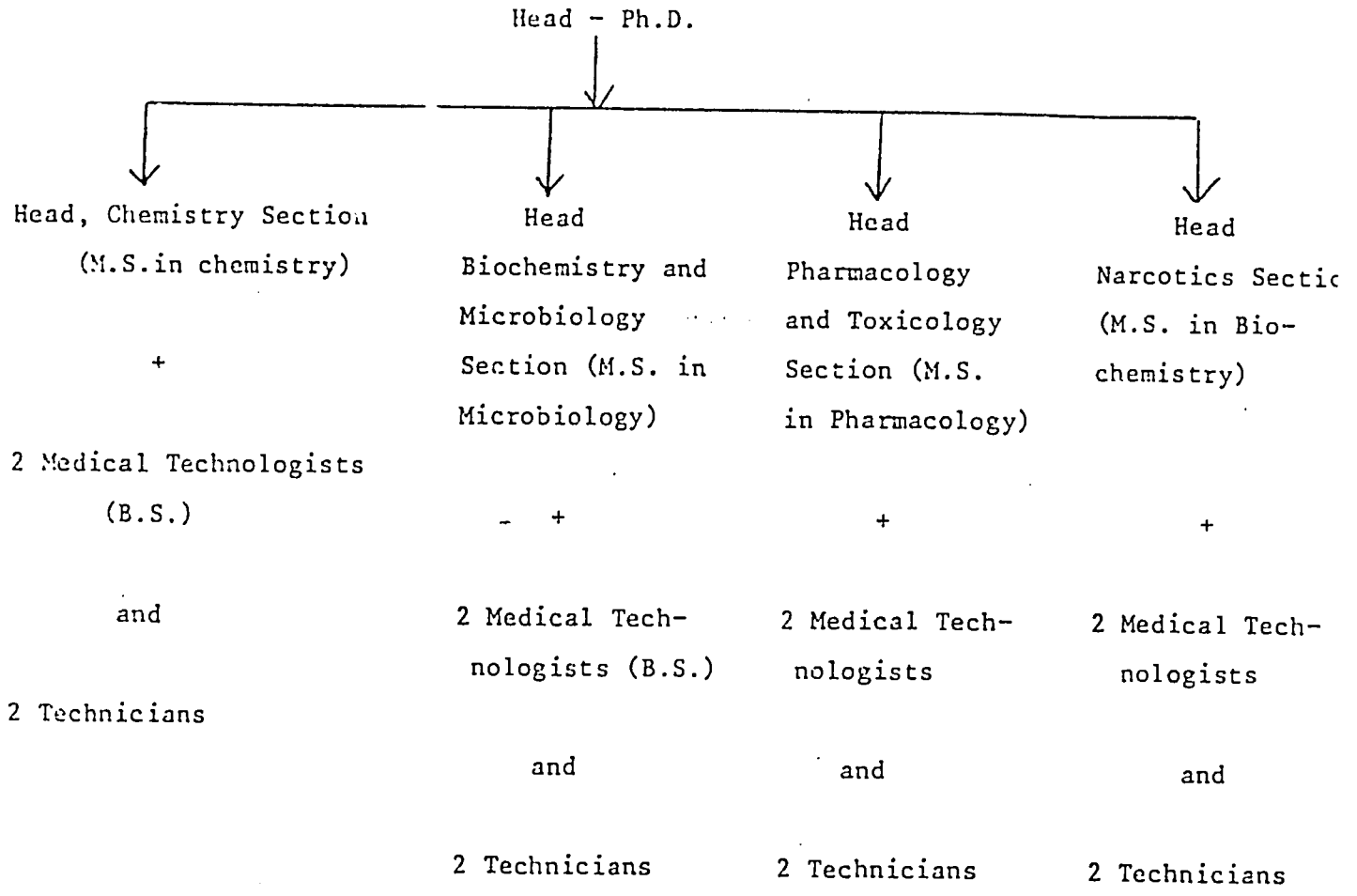
Morphine

Promezathine

ANNEX II

ORGANIZATIONAL CHART OF NATIONAL DRUGS

QUALITY ASSURANCE LABORATORIES



Note: (1) Future expansion from 1984 - 1986, depending on workload, will be at level of medical technologists as one supervisor can supervise up to 4 - 5 assistants.

(2) The central facilities of the Central Public Health Laboratories will be fully utilized e.g. stores, administration, library, procurement animal facilities, maintenance, etc.

(3) It is expected that the facilities established will be available for maximal use by all institutes in the country for development of drug assay, pharmacokinetics, clinical pharmacology, clinical pharmacy and for developing research and training activities in the country and in the region.

ANNEX III

LIST OF SOME OF THE EQUIPMENT TO BE PURCHASED FOR THE DRUG QUALITY ASSURANCE LABORATORIES , BEIRUT

1. U.V. Spectrophotometer - Double beam digital with recorder incorporated and expansion of scale.

2. Double beam I.R. Spectrophotometer with recorder

3. Flame Photometer

4. H.P. L.C. Apparatus with Spectrophotometric detector and with different columns

5. Gas chromatograph with flame ionisation detector and an ergon detector with different columns

6. Oven with temperature and humid regulator

7. Ampoule particulate size counter

8. Rotary vacuum evaporator

9. Ph.meter - digital with accessories

10. Temperature regulated with bath

11. Analytical Balance

12. Shaker and magnetic stirrer

13. Dissolution test apparatus

14. Friabilometer

15. Viscosimeter

16. Melting Point apparatus

17. Binocular microscope

18. Apparatus for testing hardening of tablets

19. Ampoule particle size counter

20. L.T.S. Kits - tanks, plates, plate holder, sprayers, microliter syringes, U-V. lamp, absorbent materials

21. Incubators

22. Colony Counter

23. Opacity tubes

24. Nephelometer

25. Membrane filter set

26. Media and liophilized strains

27. Zone recorders

28. Turbometer

29. Automatic temperature recording for pyrogen testing

30. Guillotine

31. Torsion balances

32. Surgical equipment for small animals

33. Animal cages

34. . Colorimeter

35. Thermostatically controlled isolated balls

36. Automatic Injector

37. Polygraph

38. Centrifuges - refrigerated and simple

39. Binocular Microscope

40. Histokinette

41. Automatic tissue processing apparatus

42. Cryostat

ANNEX IV

LABORATORIES WHERE ANALYSES OF DRUGS FROM LEBANON COULD BE ORGANIZED

1. Department of Drugs, Ministry of Health, Upsala, Sweden
2. British Pharmacopoea Laboratories, London, England
3. Swiss Federal Drug Laboratories, London, England
4. Institute Pasteur, Paris, France
5. Food and Drug Administration, Washington, USA
6. Institut Toxicologie, University of Paris, France
7. Drug Research Laboratories, Ottawa, Canada
8. The Pharmaceutical Society of Great Britain, London, England
9. National Drug Control Laboratories, Government of India, Calcutta, India
10. Food of Drug Laboratories, Government of Maharashtra, Bombay, India
11. The Pharmaceutical Society of Great Britain, London, England
12. Laboratory of the Government Chemist, London, England
13. National Biological Standards Laboratory, Government of Australia, Canada
14. Zentrallaboratorium Wentscher Apotheker e.g. Eschlorn, Germany
15. Services du Controle des Medicaments, Association de pharmaceutiques, Brussels, Belgium
16. State Institute for the Control of Drugs, Srobarova 48, Prague, Czechoslovakia
17. Institute for the Control of Drugs, Ulica, Mose Pljada 160, Zagreb, Yugoslavia.

2.1.2 Strengthening of the Inspectorate Section of the Pharmacy Department of the Ministry of Health, Government of Lebanon

In view of the many and varied problems, some of great complexity, being faced by the staff of the Inspectorate Section of the Ministry of Health, it is important that their competence to deal with these problems are strengthened side by side with the establishment of the National Drug Quality Assurance Laboratories. Several countries have faced and overcome, to a large degree, similar situations relating to illegal use of generic imported drugs, illegal presentation under a false label, sale of substandard and expired drugs that are present in Lebanon today. Officers of the Inspectorate Section of the Pharmacy Department of the Ministry of Health should visit such countries and observe the measures taken to overcome these problems.

It is recommended that four three-month fellowships be provided to four inspectors during 1982 and 1983. In addition it is recommended that a training course should be organized for drug control inspectorate personnel and others in 1984. The course should be organized by those who had gone for training in 1982 and 1983 together with consultants from countries that have faced and surmounted similar problems.

The reference books constantly needed by this unit have been destroyed in the war. It is recommended that such books e.g. British Pharmacopoea, Martindale's Extra Pharmacopoeae, Drugs, be purchased.

The support recommended is:

A) Fellowships

1983 - two three-month fellowships

1984 - two three-month fellowships. Total 12 man months

B) Training Course to be held at Beirut in 1984 - 5,000 US Dollars

C) Reference Books to be purchased - 3,500 US Dollars

2.1.3 Amendment and Strengthening of existing Drug Legislation

The existing drug legislation operative in Lebanon at the present time was adopted in 1950. Since then, the situation has changed in several ways and the existing laws need to be modified to provide more legal strength to the Drug Control Organization of the country. It is understood that about forty cases have been filed by the Ministry of Health against pharmacies selling drugs that appear to be illegal. No conclusions have been reached or judgements delivered in the cases and the pharmacies are carrying on their business as usual. The drug legislation needs to be updated as regards requirements needed for registration, penalties for breaking the law and other subjects that have been delineated in a model Drug legislation prepared by WHO. A copy of this enclosed model legislation (Annex V) has been given to the national authorities.

It is recommended that two consultants assist the Government of Lebanon by suggesting amendments to existing legislation. They should be Arabic speaking specialists in French law and pharmacology/clinical pharmacology respectively and should spend three months each at Beirut.

The existing laws relating to licensing of pharmacies will also be examined and brought up to date by these consultants in consonance with existing guidelines prevailing today for regulation and licensing of pharmacies.

2.2 Support to National Drug Policy Formulation and Development of a national Formulary

2.2.1 National Policy Statement on Drugs

It is recommended that the Government of Lebanon formulates and releases a national policy statement on drugs. This would state the policy of the Government regarding use of only safe and effective drugs, its efforts to reduce the price of drugs by direct import, its endeavours to prevent indiscriminate use of drugs, particularly antibiotics and its aim to encourage rational prescribing of those drugs identified as essential drugs for the country. The national policy statement could also include a descriptic of the Government's efforts to establish a National Drug Quality Assurance Laboratories and a Drug Agency for procurement from abroad of cheap drugs of good quality for distribution to all public hospitals and other institutions. It is felt that the issuing of such a National Policy Statement on Drugs will lay down the guidelines for implementation of the government policy on drugs for the next decade.

2.2.2 Inventory and Registration of all drugs now available and being used in Lebanon

Since the last Index Des Produits Pharmaceutiques for Lebanon was published in 1971-72, containing about two thousand preparations, the actual number of drug entities and products on the market today in Lebanon is not known. It is felt that the number of drug products may be around 6000. It is important that an inventory be made immediately of all drugs on the market by what is commonly known as the notification procedure. All manufacturers and distributors should be requested to complete a form for notification within a given period of time. All drugs for which this form has been received may continue

to be sold unless the authority finds inadequacies in quality or safety of the drug. If a manufacturer or distributor does not complete the required form for the drug he is supplying, such a drug must cease to be sold after a fixed date. The authorization procedure follows the notification procedure. All drugs donated by external voluntary agencies should also be included in the inventory and registration procedure. As a result, the Ministry will become aware of the number of drugs available on the market or in the hospitals in the country.

Once this inventory has been completed, then attempts will be made to reduce the number of drugs being imported into the country by formulating a national formulary or list of essential drugs in the country and allowing import only of those drugs. This will result in a decrease in the expenditure on drugs as unnecessary overprescriptic will be avoided and those drugs that are available would be used with discrimination and circumspection.

There is a peculiar problem in Lebanon in that agents and distributors have added on drugs available in the market after informing the Government in the last ten years but without actually receiving approval for registration. Since this has happened over the last ten years and these drugs are already on the market it is not possible to examine only these drugs for purposes of registration. On the contrary, it is proposed that all drugs, after the inventory has been completed, be scrutinized to see whether the drug should be allowed to be imported into the country. In this way, a list of essential drugs for the country and a list of essential drugs needed for primary health care shall be evolved.

It is proposed that a consultant be provided to the Government for six months for:

(a) assisting in preparation of a national policy statement on drug

(b) preparing the inventory, with national counterpart staff, of drugs on the market, and

(c) assisting in development of the National Formulary or a list of Essential Drugs.

The National Health Authorities, already in June 1982, have prepared a project for preparing a National Inventory of Drugs on the market and have requested for a total of 33,870.00 US Dollars for:

Phase I	-	collection and preparation of data coding and classification of drugs
Phase II	-	Purchasing data and verification Computer programming and analysis, and Evaluation of programme results

This will result in publication of 1000 copies of the list of drugs on the market.

It is recommended, therefore, that the Ministry of Health be provided with the following budget for these activities:

(a)	Project proposal for preparation of lists of drugs on the Lebanese market	33,870.00 US Dollars
(b)	Consultant assistance	6 man months

2.3 Support to national Efforts to reduce the Price of Drugs and decrease unnecessary Use of Drugs

2.3.1 Establishment of a National Drug Agency for Procurement, Storage and Distribution of Drugs

The proposal approved by the Government for establishment of a national drug agency for procurement, storage and distribution of drugs is a step in the right direction towards decreasing the cost of drugs. Several countries have, by adopting similar measures and establishing a governmental agency for import of cheap reliable drugs after global tender for drugs have succeeded by reducing the price of drugs by as much as 30%.

While welcoming this step , it is recommended that the further modalities involved in establishing such an autonomous body should be worked out in greater detail at a consultation which should be held at Beirut as early as possible. Consultants who have been involved in establishment of such an agency should draw up detailed plans and projections for such an undertaking which would include recommendations on the size of staff to be recruited, the advisability or otherwise of rising governmental channels or using a distributor from the private sector for distribution of drugs, the cost effectiveness of such an undertaking and the need, if any, forinitially carrying out a pilot study on a selected number of drugs - 5 to 10 in number. The drugs imported by the agency should be used for all patients in public governmental hospitals and dispensaries and should be prescribed for all patients for whom the Government would be reimbursing the cost of drugs.

It is recommended that this consultation meeting be held in May - June 1983 and that a sum of 25,000.00 US Dollars be kept apart for this consultation. The consultation meeting would also elaborate on the budget needed for this activity in 1983, 1984 and 1985. If necessary, WHO could initially consider undertaking the responsibility for procurement of drugs and delivering these to Beirut till the national organization is established.

At the moment the Drug Agency has been planned to be outside the national health framework. (Annex V) shows an organizational chart where the procurement agency for drugs and the personnel responsible for new drug registration quality control of drugs and for manufacture and import of drugs are all placed within the authority of a National Drug Regulation Authority. Although it may not be feasible to adopt this type of administration at the moment in Lebanon due to existing structure yet the possibility of developing such a structure in the future could be kept in mind.

2.3.2 Studies on Drug Utilization

Studies on drug utilization will indicate whether there is inappropriate excessive or insufficient utilization of drugs in any population. The results of such studies, taken in conjunction with the health survey data on the prevalence of ifferent diseases in a country will demonstrate not only over consumption of drugs but also under-utilizatio of drugs. The results will enable decisions to be taken in instituting corrective measures.

It is recommended that simple drug utilization studies be carried out in at least two centres in the country. Protocols for carrying out such studies have been developed by the WHO Regional Office at Alexandri and similar studies are being initiated in four countries in the Region. The protocols developed will be sent to the Ministry of Health and the Task Force on Drugs and the Task Force on Statistics.

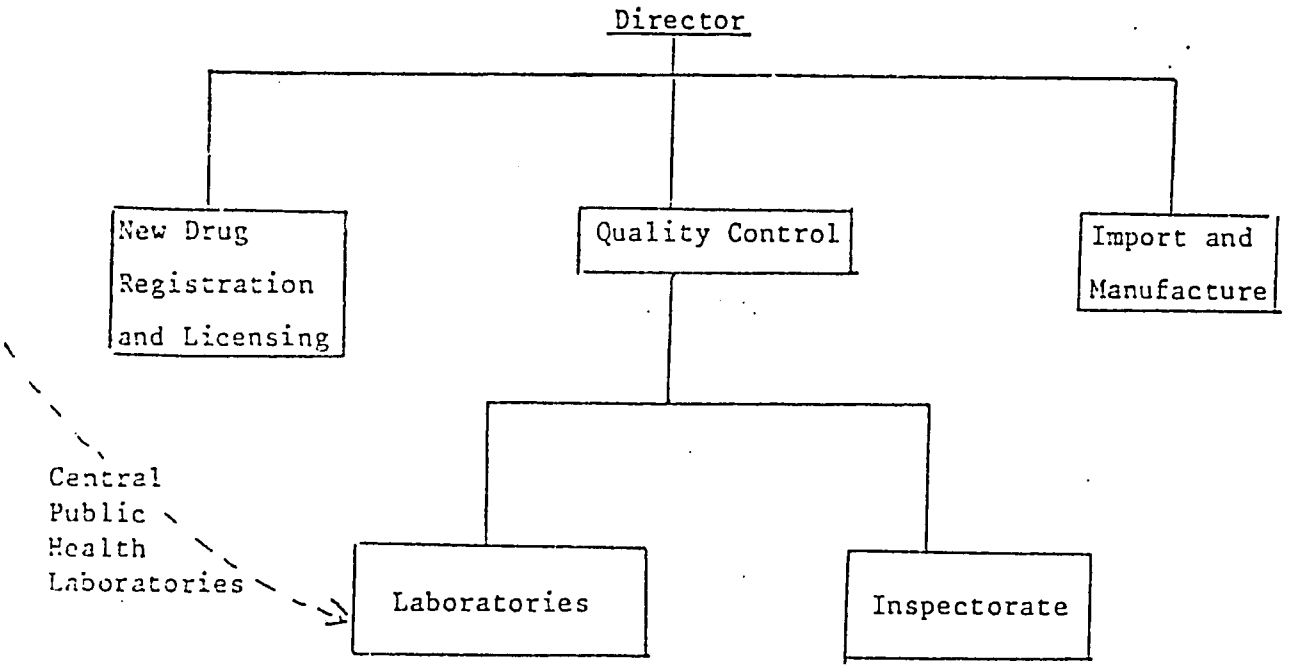
It is recommended that a sum of 15,000 US Dollars be provided to the centres that will carry out these studies for 1983.

2.3.3 Dissemination of objective information about rational use of drugs

Dissemination of objective, uptodate, unbiased information about drugs will provide doctors and pharmacists with a scientific framework for rational prescription and use of drugs. This will reduce indiscriminate and unnecessary use of drugs, decrease the expenditure on drugs and also reduce the incidence of organisms becoming resistant to drugs, particularly antibiotics. The WHO Regional Office will be publishing a three monthly "Drugs Digest" from March - April 1983. It is recommended that all doctors and pharmacists in Lebanon are sent a copy of the journal, free.

ANNEX V

ORGANIZATIONAL CHART OF A POSSIBLE NATIONAL DRUG REGULATORY AGENCY



Total Budget Implications for 1983, 1984 and 1985

2.1.1	Establishment of National Drug Quality Assurance Laboratories, Beirut	385,000.00 US Dollars 15 man months consultancy 24 man months fellowships
2.1.2	Strengthening of the Drug Inspectorate Section of the Ministry of Health, Government of Lebanon	8,500.00 US Dollars 12 man months fellowships
2.1.3	Amendment and Strengthening of existing drug legislation	6 man months consultancy
2.2.1	National Policy Statement on Drugs]	33,870.00 US Dollars 6 man months consultancy
2.2.2	Inventory and Registration of all drugs now available and being used in Lebanon]	
2.3.1	Establishment of a National Drug Agency for procurement, storage and distribution of essential drugs.	25,000 US Dollars
2.3.2	Studies on Drug Utilization	15,000 US Dollars
2.3.3	Dissemination of objective information about drugs	
TOTAL		467,370.00 US Dollars 27 months consultancy 36 months fellowships

GRAND TOTAL : Approximately 1,925,370.00 US Dollars for three years.

Annex L to the Report of the February-April 1983

WHO/LRCS Health Assessment and Planning Mission to Lebanon

HEALTH LABORATORIES

According to available information, the situation regarding health laboratories in Lebanon is as follows :

1. Treatment-oriented laboratories

Curative medicine is essentially practiced by private institutions equipped with medical laboratories performing the most common clinical tests for their patients.

In 1966, with WHO assistance, the Government set up laboratory diagnostic services in selected public hospitals (Baabda, Saida, Halba, Tripoli, Zahlé).

In addition to the clinical laboratories attached to health centres, several private laboratories in Lebanon (Beirut and major cities) perform medical tests for ambulatory patients.

No information is available concerning the resources and the activities of such treatment-oriented laboratories.

2. Prevention-oriented laboratories

In 1958 a Central Public Health Laboratory was established in Beirut in order to meet the demand for prevention-oriented tests of public interest (epidemiological surveillance, food microbiology, environmental health, drug control, etc.). Since 1974, the activity of the Central Laboratory seems to have slackened as a result of the prevailing situation in Lebanon during the past eight years. The laboratory actually interrupted all activity in June 1982 because of the hostilities, and it was severely damaged by shelling in August 1982.

At present (February 1983) repair works have been completed (with assistance from Swiss Disaster Relief) and re-equipping of the various laboratory departments is under way (with joint assistance from UNICEF and WHO). Therefore, it can be hoped that the Central Public Health Laboratory in Beirut will be operational again within a few months.

We do not know of any other prevention-oriented health laboratory in Lebanon. In order to remedy this deficiency, a Government-UNDP-WHO project (LEB/ATH/002) was designed in 1977 and signed by the parties concerned in 1980. However, due to the prevailing circumstances, implementation of the operational phase of the project could only start in 1982.

The project activities include development and strengthening of the Central Laboratory in Beirut, establishment of six public health peripheral laboratories (Djedaideh, Tripoli, Zahlé, Saida, Baalbeck, Nabatieh), and training of scientific and technical personnel.

3. Recommendation: Advisory Committee on Health Laboratories

The Minister of Health of Lebanon rightly gives top priority to preventive medicine activities and is planning to develop national epidemiological surveillance services. Because health laboratories are an essential tool for developing and implementing epidemiological surveillance and disease control operations, programming in the field of medical laboratories should naturally aim at developing the network of prevention-oriented laboratories. Since it is not possible to develop sensible and realistic programmes without the necessary information and basic data, a first step should be the collection of necessary data.

The only recommendation that can be made at present regarding health laboratories is that an Advisory Committee on Health Laboratories should be established to advise the Ministry of Health. The committee would be composed of a Chairman and of permanent members, all appointed by the Minister of Health. The Chairman should be able to designate new members to facilitiate the review of special problems and solve them quickly. Members should be selected both among users of health laboratories and among specialists in the various technical fields.

4. Proposed objectives for a health laboratory network

The advisory committee should propose to the Minister of Health the actions necessary for the establishment of a health laboratory network able to:

4.1 Carry out tests necessary for epidemiological surveillance and communicable disease control as well as any other affection which is a major public health problem.

4.2 Provide, regularly and periodically, to the ministerial services concerned all data which can be submitted to statistical analyses necessary for the establishment of prevention and control programmes.

4.3 Participate in the training and further training of scientific and technical personnel in health laboratories.

4.4 Undertake, at the request of the health authorities, any laboratory research which could help clarify and solve priority health problems in the country.

5. Proposed short-term activities for an Advisory Committee on Health Laboratories

The advisory committee should, in the short term:

5.1 Carry out a preliminary survey of laboratory service needs and resources, in order to help define future service needs and assess resources available and required.

5.2 Propose an "organizational chart" for the national health laboratory network.

5.3 Establish a list of tests which should be performed in health laboratories at various levels (central, intermediate, peripheral).

5.4 Standardize methods used for tests, taking into account their cost, reliability, reproducibility and simplicity of execution.

5.5 Standardize the equipment and reagents required for performing the planned tests.

5.6 Standardize the filing and registry system.

5.7 Assess the needs of the country in public health laboratories at different levels and, for each level, assess the needs in premises, personnel, equipment, laboratory substances and supplies.

5.8 Propose regulations applicable to health laboratories.

5.9 Report periodically to the Minister of Health on the progress of work and suggest measures to achieve the objectives.

6. Proposed Long-term activities for an Advisory Committee on Health Laboratories

Following the establishment of the health laboratory network, the advisory committee could be asked to:

6.1 Evaluate the activity of the health laboratory network.

6.2 Propose adequate corrective measures, if necessary.

6.3 Give advice and make suggestions regarding applied research to be undertaken in relation to the needs of the country.

Annex M to the Report of the February 1983

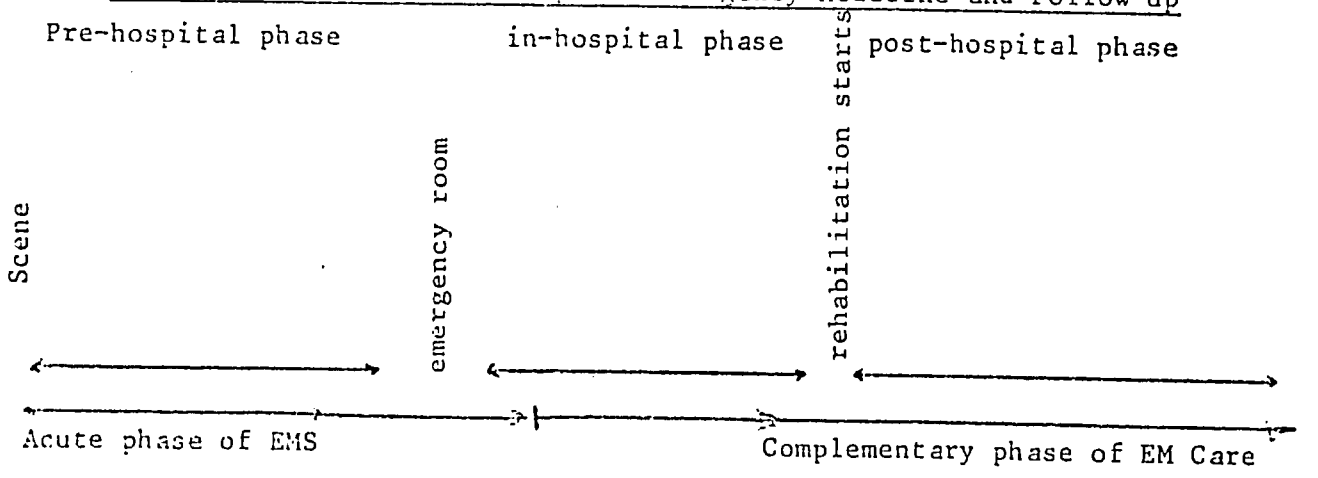
WHO/LRCS Health Sector Assessment and Planning Mission to Lebanon

EMERGENCY MEDICAL SERVICES

1. Introduction.

A systematic network of emergency medical services (EMS) usually provides for the detection and reporting of medical casualties, care at the scene, and transport and care en route to the hospital (pre-hospital phase). At the hospital, reception of the patient and immediate care/intervention must be guaranteed round the clock (in-hospital phase). After hospitalization of variable length, many patients will need continued care and rehabilitation, including their reintegration into society (post-hospital phase).

Fig. 1. Diagram Showing Relationships of Emergency Medicine and Follow-up



This report will be restricted to the assessment of and recommendation for the acute phase of EMS in Lebanon.

Within the private sector some hospitals provide emergency care of variable quality and at high costs to consumers and to contractors such as the MOH. The "équipes actives secourists" of the Lebanese Red Cross (LRC) have been operating in the most reliable, continuous and enthusiastic way throughout all those past troubled years. However, their services are based on volunteers, training is on the level of first aid only, and governmental financial support is meager (2 million LL yearly from MOH, 800,000 LL yearly from OSD for all operations run by the LRC).

The Government of Lebanon has ordered a task force from the EMS Committee to make plans for a comprehensive EMS programme for Lebanon and to study, recommend and implement means to upgrade hospital emergency departments in government hospitals as part of the overall EMS plan. Dr Nasser and members of the EMS Committee have completed an extensive review of 12 government hospitals. That inventory was completed on 5/3/82. Eight smaller government hospitals were not included in this inventory due to their small size/capacity, and private hospitals were not included for legal reasons. (Dr Nasser, personal communications). This survey included a review of supplies and equipment available, of staffing and training completed, and of capabilities to provide prompt, efficient emergency care (1).

Since the 1979 visit of a US team of EMS experts, there have been several meetings in Lebanon and the U.S. with Dr Nasser and US-EMS consulting staff from various EMS programmes in the U.S. Several recommendations were made and concrete projects for strengthening MOH hospital emergency department and EMS training and manpower development in Lebanon were set up (2,3,4). While the strategy of putting the project into action has been changed several times in the light of security problems and hostile conflict situations, the overall objectives have remained the same :

(a) Upgrade the hospital emergency departments of government hospitals to a level compatible with the needs of the Lebanese population, principally those in the lower socio-economic level.

(b) Implement an in-hospital training programme.
(c) Implement a pre-hospital training programme.
(d) Establish and improve management and administration of hospital emergency departments in line with overall EMS system development.
(e) Develop criteria for EMS personnel certification.
(f) Upgrade the knowledge and skills of physicians in the urgent care of critical patients.

The Ministry of Health has ruled that the EMS Committee (Chairman : Dr Nasser) will work either under the auspices of the CDR or the Minister of Health.

3. Conclusions

Public emergency services are below standard and there is no coherent system (pre-hospital /in-hospital) at present.

The pre-hospital phase is characterized by a lack of coordination of services, virtual non-existence of services in some sectors, an uneven coverge (urban versus rural), and limited training of necessary health manpower. The LRC first aiders deserve particular esteem for the courage and motivation with which they have continued to save lives under most difficult circumstances. Already the LRC has been selected as the centre for emergency medical technician training (ambulance drivers and attendants). Detailed plans for the administrative structure, for a network of posts including radio-communications, for personnel and training, and for financing costs have been made as far back as 1977 (5); plans have been revised slightly and figures have been brought up-to-date repeatedly. The in-hospital phase shows major deficiencies. Emergency rooms, where they exist, are poorly staffed and inadequately equipped. Most physicians have received no formal training in EM care. The majority of Lebanese hospital emergency departments do not have 24 hour medical coverage. The majority of nurses, paramedical and allied health personnel have received no formal training in basic or advanced life support. The organization of emergency facilities, if and where present, does not meet the basic function of a hospital emergency department.

4. Recommendations

4.1 The EMS Committee, under the leadership of Dr M. Nasser and conjointly with consultants of the Office of International Affairs, Health Services Administration, Rockville, Maryland, have worked during some years on the project of a coherent EMS for Lebanon and have made their recommendations (2,3,4). These must be considered in the first instance.

4.2 The EMS organizational entity must have the lead management function and must have responsibility for the total system. It must include medical and administrative leaders, with demonstrated management ability to allocate resources, control operations and monitor the system's effectiveness to increasing and changing demands for services. This council may work under the auspices of the CDR or have a direct feed-back line to the Minister of Health.

4.3 The LRC section of first-aid (secouristes) should be developed into the centre in which all pre-hospital phase personnel gets trained (a curriculum must be written which is based on the existing courses of first-aid. Intensive life support training, e.g. cardiopulmonary resuscitation, must be included). All pre-hospital phase operations should be directed from and coordinated by that same centre (coordination must include the concerned activities by fire brigade, civil defense and MOH). All bodies involved must be tuned-in to one and the same telecommunication system.

4.4 The physicians and nurses functioning in the system must have additional training in cardiopulmonary resuscitation, emergency care techniques, and equipment utilization. Continuing education of all EMS personnel is mandatory for maintaining the highest level of care delivery.

4.5 In the development stage, training support from foreign agencies and consultants may be needed, and continuing education for hospital emergency department doctors and critical care nurses should be provided (by, e.g., the AUB.)

4.6 The EMS Council (in conjunction with the General Medical Council recommended in other sections of this WHO/LRCS report) must deal with questions of legislation for specialized health personnel and help set the criteria for certification and recertification of EMS personnel.

4.7 Implementation of the pre-hospital and in-hospital phase should be started together as far as possible. This is expected to be a joint venture by the Office of International Health Services Administration Office of the US (with support from AID) and the EMS committee for Lebanon.

While it had been planned to seek establishing emergency departments in five government hospitals in a first phase (Ba'abda, Ba'albeck, Beirut, Saida, Tripoli), it has been decided later and under the influence of new events (Israeli invasion in the south) to restrict this phase I really to the upgrading of hospital emergency departments in two government hospitals in the Greater Beirut area (Karantina, Ba'abda). The first year of phase I will otherwise concentrate on appointing necessary medical and allied health personnel, training staff (both in the US and if possible in Lebanon), making building alterations, contracting maintenance for equipment, establishing the administrative structures, and buying equipment.

The EMS committee is already projecting better wages than is the current MOH rate of salaries. Other incentives that should attract potentially good people are currently under consideration.

The Ministry of Health will make funds available to CDR to support the staff and the operations of the EMS committe, salaries of MOH/hospital emergency department staff, operations of hospital emergency departments, maintenance contracts to assure that equiment will function at all times, building renovations if and whereever needed, maintenance and expansion of the EMS training centre. Six million LL are earmarked for this purpose.

The Beirut area will be the focus of implementation in the initial phase and one or two governmental hospitals should be selected for the establishment of hospital emergency departments.

Training of personnel necessary for the staffing of hospital emergency departments in other governmental hospitals (must be redefined) must start at the same time probably.

Technical assistance, i.e., training of emergency department directors, physicians to become future instructors; RNs and technicians also to become instructors thereafter and training of the EMS-director in administration, management and evaluation, and the (medical) equipment of emergency departments is expected to be available from AID and will be financed by them. AID is expected to reassess the situation in view of recent change of strategy.

4.8 A strategy should be followed by which a succinct organizational framework is basic and first, with training of health personnel, allocation of funds and equipment coming second.

4.9 A mechanism should be found through which more governmental funds can be allocated to the LRC for the development and running of their training and operational base (pre-hospital phase).

4.10 In assigning priorities to various activities to strengthen health services in Lebanon, consideration should be given to the following factors which favor development of the EMS system:

a) It is a clearly visible part of health care.
b) It is a prototype content element of PHC and therefore can be used as an"attraction" to the basic concept of "first contact care and continuous care through referral".

c) Providing high quality emergency care through the establishment of hospital emergency department in governmental hospitals will be one means by which the confidence of the people in these institutions can be gained.

4.11 Private hospitals' emergency departments must comply with the standards set by the EMS governmental council in order to be included in the reimbursement regulations.

4.12 The organization of disaster plans and continuous improvement in means to procure relief in situations of natural and man-made disasters must be given thought as soon as possible.

4.13 At a later stage efforts should be made to educate the people as to how to behave in order to avoid accidents (e.g., how to drive safely) and what to do first in an emergency situation.

REFERENCES.

1. Nasser M. Survey form : "Upgrading of Hospital and Emergency Room Services in Government Hospitals", September 18, 1981.

2. Gemma WR, Nasser M. A Project for Strengthening MOH/Hospital Emergency Department and EMS Training and Manpower Development in Lebanon.

3. Nasser M. A Project Proposal on Upgrading of Government HDs and EMS Training and Manpower Development in Lebanon.

4. Nasser M. EMS. June 1982.

5. Croix Rouge Libanaise. Equipes Actives Secouristes. Avant Projet 1977.

Annex N to the Report of the February 1983

WHO/LRCS Health Sector Assessment and Planning Mission to Lebanon

BLOOD TRANSFUSION SERVICES IN LEBANON

1. Assessment of the Situation

Available information indicates that about 40-50 000 units of blood are transfused yearly in Lebanon. Of these about 35-40 000 are collected in the country, while 8 500 were sent from other countries in 1982. It is generally recognized that a population of three million would need about 150 000 units of blood, some of it divided into different components. The basic need for factor VIII (production of which is very limited in Lebanon) would be about 45 000 donor units (as cryo-precipitate).

There are three main sources of blood in Lebanon, in addition to what is received from international sources:

- The Lebanese Red Cross Blood Bank
- The Lebanese Transfusion Centre
- Private, Commercial Blood Banks

1.1 The Lebanese Red Cross Blood Bank

The Lebanese Red Cross Blood Bank was started in 1964, has continued with essentially the same structure, and lacks sufficient management and appropriate organization.

The Red Cross has one centre each in Beirut, Jounieh, Tripoli and Zahle. It also has one unit in Beirut and one in Saida which do not collect blood but have refrigerators and distribute blood that is sent from the centres.

The Lebanese Red Cross received 8 573 units of blood from other countries in 1982. It also collected 5 068 units of blood in 1982 from different hospitals approximately as follows:

Collected in Beirut	800 units
Collected in Tripoli	765 units
Collected in Saida	50 units
Collected in Jounieh	2 702 units
Collected in Zahle	751 units
	5 068 units

The 8 573 units received from other countries, plus the 5 068 units collected in Lebanon, make a total of 13 641 units from the Lebanese Red Cross in 1982.

The Ministry of Health gives an annual contribution to the Lebanese Red Cross that roughly corresponds to the running costs of the transfusion activities (yearly 700 - 800 000 L.L.). Hospitals and patients are not charged.

1.1.1 Notable advantages of the Lebanese Red Cross Blood Bank

Almost 20 years of activity and experience
Blood donation is voluntary and non-remunerated
Well known and respected
Neutrality concerning population groups
Access to international assistance and expertise

1.1.2 Notable disadvantages of the Lebanese Red Cross Blood Bank

Lack of sufficient management and organization
Blood donor recruitment not effective
Lack of professional contract with hospital laboratories and hospital transfusion personnel
Defective practice of delivery of blood to hospitals (Patients' relatives carry the blood bags)
No arrangements for 24 hour service

1.1.3 The Lebanese Red Cross thalassemia transfusion programme

Red Cross has since 1978 provided blood for transfusion of thalassemic children. About 150 thalassemic children need blood transfusions frequently. Norway has provided about 3 000 units of red cell concentrates yearly, which has more or less covered the need. The transfusions have been given at different hospitals.

Frequent transfusions lead to iron overload, which needs treatment, i.e., instillation of the drug Desferal. Both the drug itself and the installation apparatus are expensive. The Lebanese Red Cross is now planning a transfusion centre to perform both blood transfusion and instillation of the drug (Desferal) for these children. The cost (excluding costs of blood and of personnel) will be, according to Dr Rafie of the Lebanese Red Cross:

Investments	1 105 000 LL
Annual running costs	1 062 000 LL

1.2 The Lebanese Transfusion Centre

The Lebanese Transfusion Centre was started in 1972. In principle it is a non-profit association, with a general assembly and a board of directors. It has been recognized by the Government as being of public utility.

The Lebanese Transfusion Centre has a centre in Beirut and branches in 8 major hospital laboratories, mostly in the Beirut area. Written agreements exist between the centre and hospitals.

The Lebanese Transfusion Centre collected 9 500 units of blood in 1982. 3 300 of those units were collected at Hotel-Dieu in Beirut. The Centre prepares blood components, including factor VIII (bleeding factor).

In 1977 the Centre received substantial help from WHO, through the Government, in the form of equipment. This equipment was looted, during the fighting, but was partly recuperated in 1981.

The Centre charges a processing fee from the hospitals. The calculation is based on direct costs and does not include investments. The fee is approved by the Ministry of Health. Wounded soldiers, thalassemic children, and patients who are unable to pay are not required to pay. The rest of the budget is covered by a membership fee of the association and by donations.

1.2.1 Notable advantages of the Lebanese Transfusion Centre

A growing programme under dynamic and professional leadership
Not profit-oriented
Blood donation is voluntary and non remunerated
Good contact with hospitals
Delivery of blood, laboratory testing and quality control meet professional standards
24 hour service

2.2 Notable disadvantages of the Lebanese Transfusion Centre

Private association, though recognized by the Ministry of Health
Not well known by all sectors of the population
No formal affiliation to international organizations

3. Private, Commercial Blood Banks

The magnitude of activity of private, commercial blood banks is difficult to estimate, but they may collect 40-50% of the total blood collected in Lebanon, (i.e., 20 to 25 000 units of blood annually). They serve mostly small and medium size private hospitals, but occasionally they also serve large hospitals when the blood supply from the Red Cross or the Lebanese Transfusion Centre is insufficient. Blood donors are paid different amounts depending on "market values". The price of rare blood may go very high. Some private, commercial blood banks may have quality controls, but most of them probably do not.

1.4 Other Sources

Information was obtained that some blood has also been collected by the Palestinian Red Crescent Society.

A limited amount of blood is collected from family members in emergency situations, when blood from other sources is unavailable.

2. Conclusions

2.1 Lebanon has no national blood transfusion programme and no reference laboratory for blood type serology and transfusion.

2.2 There is a distinct shortage of blood, especially of "high quality" blood obtained from voluntary non-remunerated donors.

2.3 A national programme is needed to meet the needs for blood for all patients and to assure that only blood of high quality is provided.

3. Recommendations

3.1 Overall programme development

3.1.1 We recommend that the Ministry of Health appoint a National Organizing Committee on blood transfusion, to establish an appropriate administrative structure and to work out a detailed plan for the country's transfusion service. The following representation should be included:

- Ministry of Health
- The Lebanese Red Cross
- The Lebanese Blood Transfusion Centre
- University hospitals
- The syndicate of private hospitals

Later, when the country's transfusion service has been well established, the National Organizing Committee would serve as a National Blood Transfusion Board concerning policy matters, processing fees for blood and blood components, and developing trends. We suggest that the National Blood Transfusion Board members should be appointed for terms of 3-4 years.

The main functions of the Board would be:

- To outline policy and give guidelines for the country's transfusion service.
- To approve the yearly budget.
- To control that the transfusion service is carried and according to the law and the given requirements.
- To appoint the medical director of the transfusion service.

The Board would have executive power in such matters, under the guidance of the Minister of Health and of Lebanese law.

3.1.2 We recommend that the Ministry of Health take the initiative to establish a blood transfusion service which is responsible to supply high-quality blood for all needs of the country. The following points should be observed:

- Blood transfusion and donation must follow the Code of Ethics of the International Society of Blood Transfusion, adopted also by the International Conference of the Red Cross in 1981.
- Blood donation should be voluntary and non-remunerated.
- Blood collection, processing and distribution to hospitals should be effective and economical, and should minimize waste of blood.
- Blood must be available on a 24 hour basis.
- The blood bank and transfusion service should have close cooperation and regular consultations with hospital doctors and other transfusion personnel (formal and informal).
- Transfusion services must be effectively monitored to ensure that patients are treated correctly and are not overcharged.
- The transfusion service should have a programme of information and education to the community as well as to health workers.
- The service should establish evaluation and relevant research in the management and operation of the transfusion services.
- The national transfusion service should be efficiently organized and under professional management. The medical director should be a haematologist specialized in blood banking and transfusion.

3.1.3 The existing blood transfusion resources should be utilized, including those of the Lebanese Red Cross and those of the Lebanese Blood Transfusion Centre. The Lebanese Red Cross, acting as executing agency, would be the natural body to take the responsibility for running the country's transfusion service, with the Ministry of Health in position to control, outline policy, and give financial support. To take this responsibility, however, the Lebanese Red Cross must be able to respond to the demanding challenge with an adequate administrative structure and a professional leadership. This is a most important requirement, which, after agreement of all parties, could be implemented by integrating into the transfusion services the resources of the Lebanese Transfusion Centre, including its experienced and well qualified director. The proposed organizational chart for Lebanese blood transfusion services is shown in Appendix I.

3.2. Immediate Actions Recommended

As soon as the National Organizing Committee is established, members should:

- Agree on the administrative structure.
- Appoint the medical director.
- Establish a professional leadership.
- Provide a budget.
- Work out detailed plans for the country's transfusion service.

3.3 Recommended Actions in 1983-1986

Within the next 3 years, a national transfusion service, including a national reference laboratory, should be well established in Beirut, with regional centres in the North, South, Mt. Lebanon and Beqaa. Hospitals should be contracted for local facilities to collect blood, perform cross-matching, etc., and mobile units should be running in the most effective way.

Distribution lines should be developed to ensure that all hospitals get the blood they need.

The centre in Beirut, in cooperation with the regional centres, should yearly provide training courses for transfusion personnel, including hospital doctors, nurses, and laboratory technicians.

Production of blood components should be done in the regional centres as well as in the centre in Beirut. This should also include production of bleeding factors (factor VIII) to meet the country's need.

When the need of blood and blood components is covered by the national transfusion service, all commerce in blood should be forbidden by law.

Adequate financing of the national transfusion service must be assured, including both capital and operating costs. Financing of services should in principle be based on a processing fee paid by the hospital, but not passed on to the patient. The fee should be approved yearly by the Ministry of Health. Additional costs, investments, etc., should be covered by the Ministry of Health budget, donations, etc. The Ministry of Health should contribute from its budget. Donations would be needed for investments and also to some extent for running the programme, which is a high-cost programme per patient and therefore might have a low budgetary priority with the Government.

The thalassemia centre must be reorganized and professional management established for it (together with the organization of the country's blood transfusion service). The thalassemia transfusion programme should be developed further at the Red Cross and under a special administration. Coordination with other blood transfusion activities, hospital services,

research, etc., should be through the National Board established for the country's blood transfusion service (See Annex II). A thalassemia centre must establish a close cooperation with hospitals, e.g., for surgery, which has to be done in some patients. Fetal diagnosis, antenatal and genetic counselling should be included in this programme, as well as research.

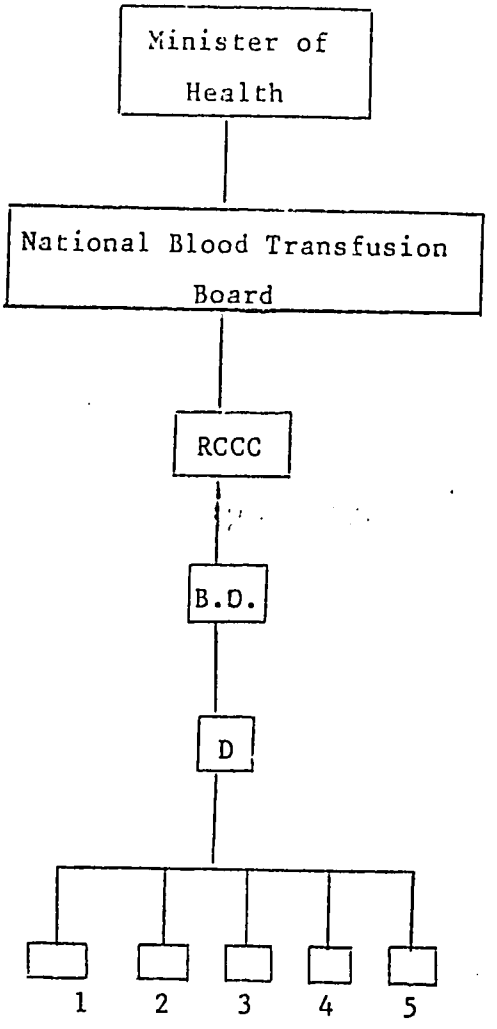
References

Reports from:

1. Lebanese Red Cross Blood Bank
2. Lebanese Transfusion Centre
3. League of Red Cross, Dr Leikola's mission to Lebanon (1982)
4. WHO's report on Community Control of Hereditary Anaemias (1981)

APPENDIX N-1

ORGANIZATION OF THE LEBANESE
BLOOD TRANSFUSION SERVICE



RCCC = Lebanese Red Cross Central Committee

BD = Board of Directors

D = General Director and Director of the Beirut Centre and Reference Laboratory.

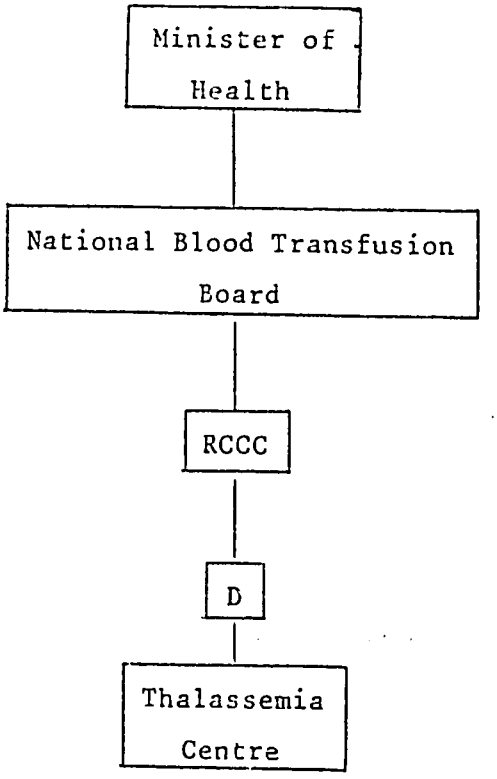
3 = Beirut Centre and Reference Laboratory.

1-2

4-5 = Regional Blood transfusion centres.

APPENDIX N-2

ORGANIZATION OF THE THALASSEMIA CENTRE



RCCC = Lebanon Red Cross Central Committee

D = Director of Thalassemia centre

Annex O to the Report of the February - April 1983

WHO/LRCS Health Assessment and Planning Mission to Lebanon

NOTES REGARDONG SOME AREAS NOT COVERED ON THE WHO/LRCS MISSION AND OTHER EXPERTS' RELATED ACTIVITIES AND REPORTS

Due to pressures of time and of inavailability of consultants and counterparts, the mission did not include several areas of major importance in Lebanon, such as:

- Demography, population, and family planning,
- Environmental health (subject of reports sponsored by EMRO and USAID),
- Occupational health (subject of a separate report by Dr M.S. El Batawi, Chief Medical Officer of Occupational Health, WHO Geneva),
- Refugee health services (subject of reports by other international agencies and not within the mandate of this mission or of the MOH,
- Rehabilitation (subject of a USAID-sponsored report in November 1982),
- Social science and area studies,
- Supplies and equipment (discussed with MOH in late 1983 by World Bank and others).

Due to scarcity of consistent and verifiable information in most areas and to shortage of time, other members of the mission were only partially able to fill in for some of the gaps in the team's composition.

Annex P to the Report of the February - April 1983

WHO/LRCS Health Assessment and Planning Mission to Lebanon

WHO HEADQUARTERS CABLE TO THE MINISTRY OF HEALTH REGARDING EARLY ACTION RECOMMENDATIONS

SANEE
BEYROUTH

7194

FOR EXCELLENCY DR ADNAN MROUEH MINISTER OF HEALTH FURTHER OUR TELEPHONE COMMUNICATION TUESDAY 5 APRIL FOLLOWING IS TEXT OF TELEX SENT ON 25 MARCH QUOTE URGENT FOR MINISTRY OF HEALTH ATTENTION PROF NABIL KRONFOL SUBJECT: WHO/LRCS PLANNING MISSION TO LEBANON STOP INITIAL RECOMMENDATIONS FOR PRIORITY ACTIONS BY GOVERNMENT OF LEBANON ONE PENDING SUBMISSION SHORTLY OF ITS EXTENSIVE REPORT THE MISSION PRESENTS TO MINHEALTH THE FOLLOWING RECOMMENDED IMMEDIATE PRIORITY ACTIONS TO INITIATE AND PERMIT MAJOR IMPROVEMENTS IN PUBLIC AND PRIVATE HEALTH SECTOR ORGANIZATIONS COMMA FINANCE COMMA MANAGEMENT COMMA OPERATIONS AND FUTURE PLANNING AS LISTED IN PARAGRAPHS TWO THROUGH FIVE BELOW: TWO PUBLIC REAFFIRMATION SHOULD BE MADE BY HIGHEST LEVELS OF GOVERNMENT OF HEALTH SECTOR POLICY GOALS AND OBJECTIVES IN SUPPORT OF DECEMBER 1982 MOH STATEMENT STOP THREE LEGISLATION SHOULD BE ENACTED (PREFERABLE BY 6 MAY 83 END OF EMERGENCY POWERS) TO INITIATE AND PERMIT MAJOR IMPROVEMENT IN PUBLIC AND

EMS/LEB 5.4.83 EMS Dr Hussein Gezairy

(Signed)
Dr Hussein Gezairy

cc: RD/EMRO

SANTE
BEYROUTH PAGE 2

PRIVATE HEALTH SECTOR ORGANIZATION COMMA FINANCE COMMA MANAGEMENT COMMA OPERATIONS AND FUTURE PLANNING THREE POINT ONE ENACT LEGISLATION REGARDING STRUCTURAL CHANGES IN THE HEALTH SECTOR: THREE POINT ONE POINT ONE MERGE INTO THE MINISTRY OF HEALTH (RENAMED THE MINISTRY OF HEALTH AND SOCIAL AFFAIRS) THE HEALTH SECTIONS OF THE MINISTRY OF LABOUR AND SOCIAL AFFAIRS (I.E., THE OFFICE OF SOCIAL DEVELOPMENT) AND THE HEALTH SERVICES SECTIONS OF THE MINISTRY OF THE INTERIOR (I.E., HEALTH SERVICES OF BEIRUT AND OTHER MUNICIPALITIES) THREE POINT ONE POINT TWO ESTABLISH THE LEGAL AND ADMINISTRATIVE STUCTURE FOR A NATIONAL HEALTH SECURITY SYSTEM (DESCRIBED IN FORTHCOMING FINANCING REPORT) BY INITIALLY (A) CONSOLIDATING ALL PUBLIC SECTOR HEALTH SERVICES COST REIMBURSEMENTS IN ONE FINANCING AGENCY AND (B) ESTABLISHING A UNIFORM FEE SCHEDULE FOR HEALTH SERVICES THREE POINT TWO DEVELOP DETAILED PLAN FOR THE IMPLEMENTATION AND MANAGEMENT OF A NATIONAL HEALTH SECURITY SYSTEM THREE POINT THREE MANDATE THE ESTABLISHMENT

OF AUTONOMOUS AREA HEALTH AUTHORITIES TO ARRANGE FOR THE PROVISION OF QUALITY HEALTH CARE TO ALL LEBANESE WITHIN NATIONAL HEALTH POLICY (SEE ITEM TWO ABOVE) AND WITH EMPHASIS ON EQUITABLE DISTRIBUTION PREVENTIVE SERVICES FIRST CONTACT CARE AND CONTINUITY OF CARE (IMPLEMENTATION SHOULD BEGIN IN BEIRUT AND INCLUDE JURISDICTION OVER HOSPITALS AND OTHER HEALTH RESOURCES WITHIN EACH AREA) FOUR IMMEDIATE ACTIONS TO PROTECT LEBANESE CONSUMERS FROM PRESENT HEALTH SERVICES PROBLEMS ENDANGERING THEIR HEALTH (AND TO ASSERT AND CONFIRM THE POWER AND AUTHORITY OF THE MINISTRY OF HEALTH) FOUR POINT ONE TO DECREASE PHARMACEUTICAL SECTOR PROBLEMS FOUR POINT ONE POINT ONE CLOSE ILLEGAL PHARMACIES FOUR POINT ONE POINT TWO CONTROL COUNTERFEIT AND INEFFECTIVE OR OTHERWISE DANGEROUS DRUGS BY ENFORCING EXISTING LAWS (MAKING FULL USE OF RECOGNIZED INTERNATIONAL DRUG TESTING LABORATORIES) AND FOUR POINT ONE POINT THREE DECREASE THE NUMBER OF DRUGS ON THE MARKET INITIALLY BY FORCING REMOVAL

OF UNAPPROVED DRUGS THEN BY REVIEWING ALL DRUGS (INCLUDING THOSE PREVIOUSLY APPROVED AND THOSE NEWLY SUBMITTED) AND ALLOWING MARKETING ONLY OF THOSE WHICH ARE SAFE EFFECTIVE AND NEEDED PER WHO ESSENTIAL LIST FOUR POINT TWO ESTABLISH OR ENFORCE LEGISLATION SETTING STANDARDS AND REQUIREMENTS FOR THE ESTABLISHMENT RECOGNITION AND OPERATION OF HEALTH PERSONNEL TRAINING INSTITUTIONS ESPECIALLY MEDICAL SCHOOLS FOUR POINT THREE ESTABLISH LIMITS ON THE AMOUNTS OF GOVERNMENT FUNDS WHICH WILL BE AVAILABLE (ESPECIALLY THROUGH THE MOH) FOR REIMBURSEMENT OF PRIVATE SECTOR HEALTH CARE SERVICES AND ESTABLISH MONITOR AND ENFORCE QUALITY STANDARDS FOR THOSE SERVICES (WHICH SHOULD ALSO APPLY TO GOVERNMENT HEALTH SERVICES) FIVE ESTABLISH THE MINISTRY OF HEALTH'S NATIONAL HEALTH PLANNING UNIT (INCLUDING A HEALTH MANPOWER PLANNING SECTION) ON A BASIS WHICH WILL MAXIMIZE USE OF ITS RECOMMENDATIONS AND LEAD TO ITS INSTITUTIONALIZATION STOP IMMEDIATELY USE NHPU TO UNDERTAKE NATIONAL SURVEYS OF EPIDEMIOLOGY

SANTE
BEYROUTH

HEALTH KNOWLEDGE ATTITUDES AND PRACTICES HEALTH MANPOWER AND HOSPITALS STOP THE UNIT SHOULD USE EARLY VALID RESULTS OF THESE SURVEYS AS PARTIAL BASES FOR NATIONAL PLANS FOR HEALTH MANPOWER DEVELOPMENT EPIDEMIOLOGICAL SERVICES PRIMARY HEALTH CARE A HEALTH CENTER NETWORK AND A NATIONAL MASTER PLAN FOR HOSPITALS SIX MISSION'S EXTENSIVE REPORT WILL FOLLOW SHORTLY STOP HONOURED TO CONTRIBUTE TO THE RECONSTRUCTION OF LEBANON GUNN UNISANTE GENEVA UNQUOTE REGARDS AND BEST WISHES

GEZAIRY UNISANTE

cmc/lob 5.4.83 EMS Dr Hussein Gezairy