

MEMORANDUM OF DISTRIBUTION

I. OBLIGATION: This is a partial  Final award under PIO/T No. 268-0350-3-1633168. If final obligation, OP has no objections to the dereferencing of any remaining funds.

II. DOCUMENT IDENTIFICATION/INFORMATION:

- a) Document No.: ANE-0102-G-00-1048-00
- b) Incremental funding action: YES  NO
- c) Buy-in: YES  NO
- d) Document has been transmitted to recipient/grantee for signature. Date transmitted: \_\_\_\_\_
- e) Method of Financing (check one only)
  - Letter of Credit
  - Periodic Advance
  - Direct Reimbursement

III. PM DISTRIBUTION

- One original signed copy to PM for recording obligation.
- One copy to FM paying office.

IV. TECHNICAL OFFICE/MISSION DISTRIBUTION:

- Technical Office: ENE/MENA, Mark Stone, Rm 3318, N.S.  
(office symbol, name, rm & bldg #)
- Mission \_\_\_\_\_  
(specify)
- ~~Office:~~ ANE/PD/PCS, Judy Britt, Rm 3320A NS
- APRE/PD, Carrie Williams, Rm 502 SA-2

V. OP DISTRIBUTION:

- OP/PS/SOP copy of all documents including final assistance document signed by all parties.

Copy of this form goes with each copy of the document distributed and one copy remains in the official file.

Contracting Officer: JW Wilson Date: \_\_\_\_\_

Agency for International Development  
Washington, D.C. 20523

AUG 3 1991

Mr. Howard A. Rusk, Jr.  
President  
The World Rehabilitation Fund, Inc.  
386 Park Avenue South  
Suite 500  
New York, N.Y. 10016-4901

Subject: Grant No. ANE-0102-G-00-1048-00

Dear Mr. Rusk:

Pursuant to the authority contained in the Foreign Assistance Act of 1961, as amended, the Agency for International Development (hereinafter referred to as "AID" or "Grantor") hereby provides to World Rehabilitation Fund, Inc. (hereinafter referred to as "WRF" or "Grantee") the sum of \$2,173,500 to initiate, implement and support an assistance and developmental program addressing several needs in the fields of Prosthetics and Orthotics (P&O).

This Grant is effective and obligation is made as of the date of this letter and shall apply to commitments made by the Grantee in furtherance of program objectives during the period beginning with the effective date and ending September 30, 1994.

This Grant is made with WRF on condition that the funds will be administered in accordance with the terms and conditions as set forth in Attachment 1, entitled "Schedule", Attachment 2, entitled "Program Description," and Attachment 3 entitled "Standard Provisions", which have been agreed to by your organization.

Please sign the original and copy of this Cover Letter to acknowledge your receipt of the grant, retain one copy for your files, and return the remaining copy to the undersigned.

Sincerely,



Judith D. Johnson  
Grant Officer  
Overseas Division-ANE  
Office of Procurement

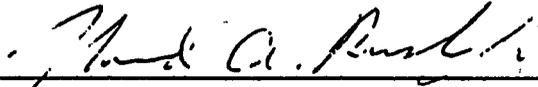
**Attachments:**

1. Schedule
2. Program Description
3. Standard Provisions

**Acknowledged**

World Rehabilitation Fund, Inc.:

By



Name/Title Howard A. Rusk, Jr. President

Date 9/10/91

**Fiscal Data**

PIO/T No.:	268-0350-3-1633168
Appropriation No.:	72-1111021.8
Budget Plan Code:	QDHA-91-33268-IG-15
Duns No.:	99-001-0464
Total Estimated Grant Amount:	\$2,173,500
Total Amount Obligated:	\$2,173,500
Technical Office:	ENE/MENA, Marx Sterne

ATTACHMENT I

SCHEDULE

**A. PURPOSE OF GRANT**

The purpose of this Grant is to provide improved and expanded rehabilitation for civilian victims of civil strife in Lebanon. The grant will support activities in four areas: training, upgrading and expanding services, development of professional systems and standards, and integration of orthopedic services with other rehabilitation programs and activities, as more fully described in Attachment 2 to this Grant entitled "Program Description".

**B. PERIOD OF GRANT**

1. This Grant is effective as of the date of the Grant Officer's signature on the cover letter of this Grant. The expiration date of this Grant is September 30, 1994.
2. Funds obligated hereunder are available for program expenditures from the effective date of the grant to September 30, 1994.

**C. AMOUNT OF GRANT AND PAYMENT**

1. The total estimated amount of this grant for the period shown in B.1 above is \$2,173,500.
2. AID hereby obligates the amount of \$2,173,500 for program expenditures during the period set forth in B.2. above and as shown in the Financial Plan below.
3. Payment shall be made to the Grantee in accordance with procedures set forth in Attachment 3 Standard Provision 1, entitled "Payment - Letter of Credit".

**D. FINANCIAL PLAN**

The following is the Grant Budget. Revisions of this budget shall be made in accordance with the Standard Provision of this Grant, entitled "Revision of Grant Budget".

## Financial Plan

Professional Technologist Training Program	\$334,846
Continuing Education and Skills Development Program	\$200,000
Education Programs for Other Professionals	\$150,000
Support of Professional Development in Services	\$ 75,000
Upgrading Prosthetic-Orthotic Workshops and Production	\$600,000
Upgrading Professional Systems, Legal Matters, and QA	\$ 75,000
Provision of Technical and Consultative Services	\$100,000
On-Site Administration Costs	\$275,000
U.S. Based Administration Costs	\$ 80,154
Indirect Costs	<u>\$283,500</u>
<b>TOTAL PROJECT COSTS</b>	<b><u>\$2,173,500</u></b>

The budget estimates for AID funded items are illustrative. In no event will total costs exceed the maximum amount of the Grant, \$2,173,500.

## E. REPORTING AND EVALUATION

### 1. Project Reports

WRF shall submit quarterly reports to ENE/MENA. Summary financial data shall be attached to these reports (in addition to the financial reporting requirements required under this grant). AID may also request special reports on specific topics on occasion.

### 2. Final Report

A final evaluation report and a final report on the utilization of grant funds shall be submitted by WRF to ENE/MENA within 90 days of the completion date of the Grant as set forth in paragraph B. This report shall summarize all activities undertaken under this grant and give an assessment of program results and achievements.

### **3. Fiscal Reports**

a. Fiscal reports shall be submitted in accordance with the AID Optional Standard Provision 1, "Payment - Letter of Credit".

b. The original and two copies of all financial reports shall be submitted to A.I.D., Office of Financial Management, Program Accounting and Finance Division (PFM/FM/CMPD/DCB), Washington D.C. 20523. In addition, one copy of all financial reports shall be submitted to the Technical Office specified in the Cover Letter of this Grant.

### **F. SPECIAL PROVISIONS**

1. The Grant Standard Provisions, appended hereto as Attachment 3, are considered applicable to this Grant.

2. The cost principle applicable to this Grant is OMB Circular A-122.

3. Direct compensation of personnel will be reimbursable in accordance with the established policies, procedures and practice of the grantee and the provision of the applicable cost principles, entitled, "Compensation for Personal Services". Such policies, procedures and practices shall be the same as used in contracts and/or grants with other Government agencies and accepted by the cognizant U.S. Government agency assigned primary audit responsibility, shall be in writing and shall be made available to the Grant Officer, or his/her designated representative, upon request. Compensation (i.e., the employee's base annual salary) which exceeds the maximum level of the Foreign Service 1 (FS-1) (or the equivalent daily rate), as from time to time amended, will be reimbursed only with the approval of the Grant Officer.

#### **4. AID Eligibility Rules for Goods and Services**

a. It is anticipated that the total procurement of goods and services under this grant will be greater than \$250,000.

b. All goods and services shall be purchased in accordance with the Optional Grant Standard Provisions #7, entitled "A.I.D. Eligibility Rules for Goods and Services." All goods and services, which will be reimbursed under this grant and financed with U.S. dollars, shall have their source and origin in the U.S. (Code 000) or the Cooperating Country, Lebanon. Exceptions to this shall be approved in writing, prior to purchase, by Marx Sterne, ENE/MENA. Except for ocean shipping, the suppliers of commodities or services shall have the U.S. or Lebanon as their place of nationality. Exceptions to this rule shall have prior approval in writing from Marx Sterne, ENE/MENA. Ocean shipping financed by AID under this Grant shall be financed only on flag vessels of the United States, unless prior approval is obtained in writing from Marx Sterne, ENE/MENA.

5. Procurement and Shipment of Pharmaceuticals/Medical Supplies

a. The Recipient shall obtain approval from the A.I.D. Grant Officer prior to the shipment of any procured pharmaceuticals/medical supplies or donated pharmaceuticals/medical supplies being shipped at grant expense. The following criteria shall apply:

The list of pharmaceutical/medical supplies submitted for approval shall contain product description, i.e., trade name and/or generic name, dosage form, potency/concentration, and unit package size, lot number, expiration date, and name of manufacturer.

All U.S. source/origin pharmaceuticals and other products regulated by the Food and Drug Administration (FDA) to be procured and/or shipped must be in compliance with all applicable U.S. laws and regulations governing the interstate shipment of these products at the time of shipment. Pharmaceuticals donated from non-U.S. source/origin must meet the standards of the U.S. FDA. All items must be shipped properly packaged to preserve the quality of the product. This includes those products that require special temperature conditions during shipping and storage, e.g., refrigeration.

No product requiring expiration dating shall have less than three months shelf life on receipt in the benefiting country. The Recipient shall be responsible for determining that all dated products procured and/or shipped will have sufficient opportunity to be received, distributed, and used according to labeling directions by the end user prior to product's expiration date.

## **6. Local Cost Financing**

This grant authorizes the use of local cost financing, provided such financing falls within the legitimate needs of the program description applicable to this Grant and does not exceed the following limitations:

1. Procurement locally of items of U.S. origin up to a per transaction limit of the local currency equivalent of \$100,000.
2. Procurement locally of items of non-U.S. origin up to a per transaction limit of the local currency equivalent of \$5,000.
3. Commodities and services available only in the local economy (no specific per transaction value applies to this category). This category includes the following items:
  - a. utilities—including fuel for heating and cooking, waste disposal and trash collection;
  - b. communications—telephone, telex, fax, postal, and courier services;
  - c. rental costs for housing and office space;
  - d. petroleum, oils, and lubricants for operating vehicles and equipment;
  - e. newspapers, periodicals, and books published in the cooperating country, and
  - f. other commodities and services (and related expenses) that, by their nature or as a practical matter, can only be acquired, performed, or incurred in the cooperating country.

In cases where local cost procurements are expected to exceed the above limitations, the Grantee must obtain approval from the Grant officer prior to proceeding with the procurement.

Except as otherwise changed by the above limitations, the conditions of the Optional Standard Provision entitled Local Cost Financing (November 1988), hereby incorporated into this Grant, apply, including paragraphs (b), (c), (d), (e), and (f).

The total estimated cost and the obligated amount of this Grant remain unchanged.

All other terms and conditions of this Grant remain unchanged.

**G. Indirect Cost Rates**

Pursuant to the Optional Standard Provision of this Grant entitled "Negotiated Indirect Cost Rates-Provisional," a rate or rates shall be established for each of the Grantee's accounting periods which apply to this Grant. Pending establishment of revised provisional or final indirect cost rates for each of the Grantee's accounting periods which apply to this Grant, provisional payments on account of allowable indirect costs shall be made on the basis of the following negotiated provisional rates(s) applied to the base(s) which are set forth below:

**TYPE OF RATE: Provisional**

**RATE: Indirect Cost 15%**

**BASE: Total direct costs**

**PERIOD: 7/1/90 Until Amended**

**H. Title to and Use of Property (Grantee Title)**

Title to all property financed under this grant shall vest in the Grantee, subject to the conditions under the special provisions herein.

## PROGRAM DESCRIPTION

### Statement of Work Grant to the World Rehabilitation Fund Prosthetic and Orthotic Services (268-0350)

**I. BACKGROUND.** The World Rehabilitation Fund (WRF) has been an active participant in the delivery and development of rehabilitation services in Lebanon for many years. A.I.D. has been a major contributor to WRF's efforts. This agreement provides for a new phase in this collaboration. The focus will be to develop and deliver prosthetic and orthotic services, with civilian victims of civil strife as the primary target group.

**II. PURPOSE/ACTIVITIES.** The purpose of this grant is to provide improved and expanded rehabilitation for civilian victims of civil strife in Lebanon. The grant will support activities in four areas: training, upgrading and expanding services, development of professional systems and standards, and integration of orthopedic services with other rehabilitation programs and activities. Both public and private institutions will receive support under this grant in ways that will foster a coordinated national rehabilitation system providing quality services and assuring access for all people of Lebanon, regardless of confessional affiliation or geographic location.

Training will be established/improved through a number of avenues. Establishment of a two year "professional technologist" training program at the American University of Beirut (AUB) will help to alleviate the shortage of qualified prosthetic/orthotic personnel in the country. This grant will initiate the first continuing training program of this type in the region which may, in the future, provide for the manpower needs of other countries in the region.

In conjunction with the professional training an in-service training program for practicing technicians will be developed. This is intended to improve both the quantity and quality of devices produced in existing workshops.

Training will also be provided to individuals working in related professions such as: medicine, nursing, emergency care, social work, psychology and administration. This training will be primarily in-service, but the inclusion of relevant aspects of rehabilitation within the curriculums of existing professional training programs will also be facilitated.

Increased availability of professional literature and journals for the use of practicing and student technicians will be needed and will be addressed as a necessary component of the training strategy.

Upgrading services and improving local production will be an important objective of this grant. Emphasis is expected to go to upgrading of equipment, provision of supplies, centralization of component part production and repair/maintenance capabilities, and referral of patients to those facilities with appropriate capabilities and specializations.

Professional systems, legal matters and quality assurance developments will be necessary for the longer term viability of prosthetic/orthotic and broader orthopedic services in Lebanon. A relatively small effort into establishing and strengthening professional organizations and standards is expected to have long term benefits. The same is true of establishing a legal basis for these professions as well as fostering public support.

Integration of prosthetic/orthotic services into the broader system of social services will help insure that rehabilitation goes beyond just medical and physical needs. It is also critical that individuals re-establish themselves in their families and communities.

III. PRIORITIES. Priority under this grant will be given to direct services to individuals. Thus most of the effort will go into training and upgrading/expanding of services.

IV. REPORTING/WORK PLANS. The WRF will provide A.I.D. with the following reports and work plans:

Three months after signing of the grant, WRF will provide A.I.D. with a work plan for approval. This plan will detail activities over the next twelve months and also describe how these activities will fit into meeting longer term objectives. A second work plan covering the remainder of the project will be submitted to A.I.D. for approval 12 months after the first plan is approved. These work plans will contain detailed targets against which project progress can be measured. Targets will be cited at several levels, for example:

- o Service provision:
  - number of prostheses fitted and in use
  - production increased from x to y
  - quality improved from a to b
  
- o Factors necessary for service provision:
  - trained manpower
  - equipment repaired or replaced
  - supplies provided
  
- o Systems indicators:
  - centralized production of component parts
  - centralized repair
  - referral; system
  - legal basis

WRF will provide A.I.D. with quarterly reports of progress. These reports will describe progress against specific activities in the work plan as well as against the long term objectives of the grant. The reports will cover any problems encountered, actions taken to overcome these problems and whether any adjustments in project objectives or strategies may become necessary. Summary financial data will be attached to these reports (in addition to any other financial reporting requirements required under this grant).

A final report will cover the overall accomplishments of the grant.

V. EVALUATION. A mid-term and a final evaluation are to be conducted. WRF and A.I.D. will collaborate in developing the scope of work for both evaluations and any external evaluators will be acceptable to both organizations. The detailed targets developed in the work plan will be a major part of the evaluations, but the long term objectives, project design and strategies will also be considered.

## **PART I**

### **SUMMARY**

The civil and regional conflicts in Lebanon over the past 15 years left the country with a very high number and proportion of disabled individuals who face ever increasing difficulties in their quest for needed services. Those in need of artificial limbs, braces and related mobility devices face more difficulties in view of the increasing cost of such devices and items. The outcome is a delayed and threatened, many a time aborted, process of rehabilitation with ever increasing personal misery and suffering in addition to an ever increasing strain on the material and non material resources of families, communities and the country as a whole. The bleak situation is further aggravated (a) by escalating inflation; (b) the meager resources of the government; (c) a progressive decrease in the capacity and range of services at non-profit service delivery units primarily due to the lack of dedicated international assistance and (d) decreasing professional skills primarily due to brain drain and absence of continuing education and skills development programs.

Of the estimated 20,000 disabled individuals, the overwhelming majority of whom are civilians, who are in need of one form or the other of prosthetic and orthotic services; the non-profit sector was able to provide services to about 1200 individuals during 1989 and 1990 leaving the rest either at the mercy of the very expensive private sector or entrapped in a vicious cycle of deteriorating social and psychological well being and function. At this stage there is no structured program that address the needs of those individuals; and other ongoing rehabilitation programs fail to provide the answer to their problems and needs.

In view of this and based on extensive experience in Lebanon and other developing countries, the World Rehabilitation Fund, Inc. (WRF) is prepared to develop and implement a comprehensive project aiming at upgrading prosthetics and orthotics (P&O) services in Lebanon aiming at meeting the needs, decreasing the human suffering and upgrading the socioeconomic well being of the maximum number of disabled children and adults, in need of prosthetic and orthotic services, throughout Lebanon. Such program, as proposed, will complement and supplement the previous and ongoing rehabilitation programs and activities of WRF in Lebanon. The proposed project has the following categories of components:

1- A university based professional technologist training program in prosthetics and orthotics. This will be developed and implemented in partnership with the American University of Beirut.

2- An aggressive continuing education and skills development program that addresses the needs of the various manpower categories who are involved directly and indirectly in the provision of prosthetic and orthotic services.

3- Providing P&O service delivery units with technical and material assistance that aims at upgrading the scope, quality, range and efficiency of their services.

4- Active involvement in, and the development of, national, professional and institutional systems and processes that will govern the practice of the P&O profession ensuring efficiency, fair pricing, appropriateness and quality .

5- Collaboration with disabled individuals, families, professional and 'consumer' groups in an attempt at upgrading public awareness and social commitment in favor of the needs and potentials of disabled individuals; always emphasizing the importance of prevention and rehabilitation.

In designing, developing and implementing the various components of the project, WRF will work in partnership and collaboration with leading governmental and non-governmental institutions and organizations in Lebanon with a commitment towards developing local human and material capabilities in the spirit of self reliance and self determination. This will increase the socio-cultural appropriateness of the programs, and their sustainability.

With the recent favorable socio-political environment and the cessation of hostilities, the proposed project can, and is expected to, serve as a model within the context of efforts to rebuild the country, its human resources and infrastructure.

With progress towards peace and stability in Lebanon, this project may serve as a model and a training site for the region; the international and regional experience of WRF together with the actual and potential regional role and credibility of AUB will allow for and facilitate such a development should conditions permit.

The world rehabilitation Fund is requesting, from the Agency for International Development, a grant for a total of 2,173,323.00 US Dollars to be used over a period of three years towards the various phases, components and elements of the project. A detailed discussion related to the proposed project and requested grant is presented in Part II of this document.

## **PART II**

### **THE PROJECT**

#### **A. INTRODUCTION AND BACKGROUND INFORMATION**

Lebanon has an estimated population of about 3,000,000 people with an additional Palestinian refugee population of about 500,000.

The country has endured more than 15 years of civil war and strife, military invasions and an ongoing state of violence due to regional conflicts. The outcome is a deteriorating socioeconomic situation, an ever increasing brain drain, a very large number of fatalities and an ever increasing number of direct war injuries with loss of limbs and other crippling conditions. Add to this the crippling conditions due to (a) deteriorating medical services; (b) breakdown of immunization and other preventive programs; (c) the progressive inaccessibility of medical services due to the destruction of facilities and deteriorating economic conditions; (d) The exodus from Lebanon of professional personnel; (e) no or poor emergency medical care resulting in disabling conditions and/or aggravated dysfunction that could have been prevented; (f) poor nutrition, unsanitary living conditions; and (g) the lack of any national program aiming at the prevention of disability involving, among other things, health education and environmental factors.

The result is an ever increasing proportion of disabled individuals in Lebanon, the utmost majority of whom are civilians, suffering from various forms of disability. Out of those it is estimated that at least 20,000 people are in need of one form or the other of prosthetic and orthotic services without which they will continue to suffer of serious mobility and other functional problems.

There have been no credible national surveys of disability in Lebanon; hence there is no finite figures about the number of amputees and others in need of P&O services. The foregoing estimate of 20,000 is based on limited partial surveys of disability, service records of the non-profit prosthetic / orthotic (P&O) workshops, records of hospitals and rehabilitation centers, the records of the community based rehabilitation programs and anecdotal information from various categories of workers in the field.

Data from seven non-profit P&O Service delivery units in Lebanon, operating at full capacity, during 1989 and 1990 show that 1221 'units' of services were provided to 1128 disabled individuals. Among those disabled individuals, of all age groups, 65% had disabilities due to direct war injuries while 18% and 10% of the disabilities were due to communicable diseases and congenital malformations respectively; only 7% of the cases were disabled due to accidents and injuries (Figure 1, Appendix 1). Utilization data also show that about 75% of those served were males (Figure 2, Appendix 1) and that 54.1 were in the age group 15 to 64, 25.3% in the age group 5 to 14 and only 9.8% were over 64 years of age, the retirement age in Lebanon (Figure 3, Appendix 1). Other data relating to utilization patterns are reflected in detail in Figures 4 to 8 and other parts of Appendix 1.

Thus, it is evident that the non-profit sector cannot meet the overwhelming demands. It is suffering major and increasing shortages in equipment, raw materials, trained personnel and other resources for producing in any significant way, the quantity and quality of prostheses, braces and other mobility devices required for serving the relatively large number of amputees and other mobility disabled people in their catchment areas. This situation is further aggravated by the suspension and / or stopping of most, if not all, international assistance programs in this field; the programs of the International Red Cross and the Danish Red Cross are examples.

The poor condition of the estimated 20,000 persons who require artificial limbs, braces and other mobility devices and their meager chances for gaining functional ability is further aggravated by the prevailing socioeconomic conditions which have been deteriorating over the past several years. Most lack the funds to purchase services and devices from the private for-profit sector.

## **B. THE CURRENT STATUS OF PROSTHETICS AND ORTHOTICS SERVICES IN LEBANON:**

To gain better and more objective understanding of the situation and related needs the Lebanon office of the WRF collected data and information from the operating non-profit P&O service delivery units in Lebanon through a survey that was completed by the end of 1990. In addition a general discussion meeting was called for by the WRF office in Lebanon to which all known P&O service facilities, suppliers, leading practitioners and concerned disabled groups were invited. The meeting was held on January 17, 1991. Additional information was obtained by site visits to various P&O facilities; discussions with officials of the Ministry of Health and Social Affairs, concerned professionals, individuals and active local and international private voluntary Organizations in the field. The findings, impressions and conclusions are detailed and discussed in Appendix 1.

Prosthetic and orthotic services in Lebanon are available through non-profit service delivery units as well as privately owned for-profit service units.

**1. Non-profit service delivery units:**

In the above noted survey, 8 of the 10 known non-profit service delivery facilities responded by completing various parts of a specially designed questionnaire. Data, and discussion are detailed in Appendix 1 of this document. It is important to note that several small fitting and repairs outlets exist as part of rehabilitation facilities; these small facilities are not thought to have a significant impact on the status of services.

Following are some observations that were evident during the process of the above noted survey which may influence the interpretations of the findings of this survey:

- a) Most, if not all, of the surveyed service delivery units lacked an appropriate administrative and management system that is necessary for the appropriate functioning of such service units.
- b) All had poorly organized to practically non existent information systems thus limiting their ability to access and / or benefit from the wealth of data and information that exists in their files.
- c) Most, if not all, were functioning on a day to day basis. This is due to the limited availability of operational funds and resources as well as to great uncertainties related to the commitment of the technical and professional staff.
- d) It is important to note that the non-profit service delivery unit at Sidon which was a joint operation between the local institution and the International Red Cross Society (ICRC) was closed between October of 1989 and the middle of December 1990. This facility is currently operated by the local institution with minimal material assistance from the ICRC. The non-profit facility in Tripoli was also closed for a long time until May of 1990. This facility was originally supported to a large extent by European Red Cross Societies and had to close when those organizations suspended their activities and programs in Lebanon. Currently it is operated by the local institution.

**2. Private for profit service delivery units:**

Anywhere between 8 and 10 privately owned and operated fee for service Prosthetic and Orthotic shops are operational in different parts of Lebanon. The status of these facilities is not well known due to lack of credible data. However, it is evident that they are fairly busy providing very expensive services often costing more than they do in the United States. These services are way beyond the reach of the vast majority of the Lebanese who need them. At

the above noted meeting of January 1991, those prosthetists and orthotists in the private sector voiced objection to the provision of assistance to non-profit service delivery units and questioned the need for a local training program. Undoubtedly they were concerned about their business and livelihood.

### **C. PROJECT RATIONALE AND OBJECTIVE**

It is evident that the needs are overwhelming, the resources limited and programmed interventions are practically non-existent. Short of additional help individuals in need of P&O services will continue to suffer, will probably deteriorate in functional ability and potential and will present an ever increasing burden on families, communities and society in general.

With the increasing hope for peace in Lebanon, the timing is optimal and the opportunity exists for the initiation of a program aiming at addressing the needs of Lebanon in the fields of Prosthetics and Orthotics.

This proposed project is a humanitarian undertaking aiming at assisting civilians in Lebanon who are most vulnerable and least able to obtain needed services. In doing so, personal suffering may be decreased and the drain on the material and non-material resources of families, communities and the society will be reduced.

The World Rehabilitation Fund's ultimate objective for Lebanon is the development of local capabilities that will allow for the provision within Lebanon of whatever services required by its disabled people, regardless of their economic status, geographical location, or confessional affiliation. This will result in a progressive decrease in suffering, emotional and material dependency and economic drain. There will be a strengthening of the social commitment towards the needs of the disabled, upgrading of preventive services and an ever increasing development of local human and material resources. All will be done in the spirit and within the framework of providing immediate assistance, increasing self reliance and optimizing self determination.

In the quest of this objective, The World Rehabilitation Fund works, and coordinates its activities, with all concerned Governmental and Non-Governmental Agencies in Lebanon especially those that receive financial support from the Agency for International Development (AID). This project gains special significance in view of its implementation in partnership with the American University of Beirut, a highly respected and credible institution with an outstanding record of service and commitment to the needs of the people in Lebanon and the region.

#### **D. THE WORLD REHABILITATION FUND-- BACKGROUND AND TRACK RECORD**

Founded in 1954 by Dr. Howard Rusk, The World Rehabilitation Fund ( WRF ) is one of the foremost organizations involved in the development of rehabilitation programs for disabled individuals throughout the world. The Fund has assisted 158 countries in some phase of rehabilitation planning for, and service to, disabled men, women and children. Among these countries and areas are Russian Armenia, devastated by an earthquake; Lebanon, devastated by more than 15 years of civil war and regional conflicts; Nicaragua, torn apart by civil war; Cyprus, where the only time ordinary citizens of the two separated communities come together is in rehabilitation training seminars conducted by the World Rehabilitation Fund; and Honduras, India, the Philippines, the West Bank, Egypt and Israel.

The World Rehabilitation Fund had an extensive experience in Lebanon. It is currently involved in the implementation of a nation wide program, funded by AID, aiming at upgrading rehabilitation services, facilities and related systems all over Lebanon. Of particular significance, within the context of the long standing commitment of WRF towards the rehabilitation needs in Lebanon, is the establishment in 1972 of a prosthetic-orthotic training program at the Al-Kafaat Rehabilitation Center -- the very first rehabilitation training program in Lebanon. Twelve technicians were trained, some are still working in Lebanon.

#### **E. PROJECT PERSPECTIVE, GOAL AND PURPOSE**

As emphasized earlier the needs in the fields of Prosthetics and Orthotics are overwhelming. The goals of the project are to initiate, implement and support, to whatever extent may be possible, an assistance and developmental program addressing the following needs in the fields of Prosthetics and Orthotics (P&O).

- 1- The need to develop appropriate technical and professional training and development programs in Lebanon. This includes the establishment of a formal, University-based, degree granting program at the undergraduate level in prosthetics and orthotics; various programs and activities within the context of continuing education; upgrading the skills of the various categories of active practitioners; and prevention of brain drain.
- 2- The need to upgrade the efficiency, capacity and range of services provided by Prosthetics and Orthotics service delivery facilities.
- 3- The need to emphasize the overwhelming importance of prevention always taking into consideration that P&O services are only a part of the process of rehabilitation.

- 4- The need to optimize utilization of service delivery units by decreasing financial and other related barriers and facilitate coordination and cooperation among the various units aiming at improving production capabilities and prevention of inappropriate utilization and abuse.
- 5- The need to upgrade public awareness, clarify and increase social commitment and emphasize self reliance, self determination and socioeconomic appropriateness. In addition, there is a need to address matters related to financing rehabilitation and P&O services within the context of overall national plans for the financing of health and social welfare services.
- 6- The need to establish and institutionalize professional, legal and administrative systems that will govern the practice of the prosthetic / orthotic profession and address matters related to quality assurance.
- 7- The need for active coordination of International Assistance in this field and for the integration of P&O related programs with other programs in the general field of rehabilitation.

Programs addressing all or part of the listed categories of need will be designed with the aim of meeting immediate needs and the overall goal of assisting Lebanon to become self sufficient, to the maximum possible extent, in providing Prosthetic and Orthotic services to its disabled people to allow them to achieve maximum functional capacity in meeting the demands and activities of daily living. Short of this, the vast majority of those in need, will be victim of a vicious cycle of decreasing productivity, increasing suffering and socioeconomic dependency.

#### **F. PROJECT COMPONENTS AND ELEMENTS**

The proposed project will have four (4) major components. It is designed and will be implemented in a developmental modular way aimed at maximizing benefits and decreasing waste and redundancy.

##### **1- PROFESSIONAL TRAINING AND CONTINUING EDUCATION:**

Major emphasis will be placed on matters related to training and manpower development.

##### **1.1- PROFESSIONAL TECHNOLOGIST TRAINING PROGRAM IN PROSTHETICS AND ORTHOTICS.**

The most important aspect of the training component will be a two year "Professional Technologist" training program aiming at graduating adequately and appropriately trained technologists in the general fields of prosthetics and orthotics. At this stage, it

is proposed to start the program with ten trainees. This program will be conducted by the American University of Beirut under the jurisdiction of the Division of Physical Medicine and Rehabilitation of the Faculty of Medicine with technical and material assistance from the World Rehabilitation Fund and other concerned and interested local and international agencies and organizations in Lebanon. Among the various institutions of higher learning in Lebanon, AUB is definitely the most able institution to develop and implement this innovative program in collaboration with active Prosthetic and Orthotic service delivery units that may serve as training sites for the prospective trainees. The American University of Beirut will be also instrumental in other matters related to manpower development. Its proposed role is detailed later in this proposal and the outline of the proposed undergraduate prosthetics / orthotics training program are presented in Appendix 3.

The need for such a program cannot be overemphasized as the serious technical and professional manpower shortages are expected to increase.

The proposed program is designed to meet a significant portion of the manpower needs at the technical level. The long standing experience of WRF with such training programs in developing countries was relied upon extensively in shaping the details of the proposed program. Experience with this program in Lebanon will prove valuable in relation to other related prospective manpower development programs and activities, in Lebanon and the Region.

The regional credibility of The American University of Beirut and its track record will provide the potential for the transformation of the proposed program into a regional program addressing the needs of other countries in the region. Such is a definite probability in view of the overwhelming regional needs, the practical absence of other similar training programs in the Arab World and Cyprus, the potential of AUB and the improving security situation in Lebanon. Should this happen, the result will be a favorable state of affairs for the Lebanese economy, AUB and the region as a whole.

The American University of Beirut will also serve as a primary resource institution in the processes of planing and implementation of the remaining phases of the Training and Continuing Education component as well as other components of the project

#### **1.2- CONTINUING EDUCATION AND SKILLS DEVELOPMENT PROGRAMS FOR PROSTHETISTS AND ORTHOTISTS.**

As detailed earlier, there is an unknown number of active practitioners in the field of Prosthetics and Orthotics (P&O) in Lebanon. The professional training and background of a significant portion of them is not known and may be inadequate. Even those with credible training background have not been exposed to any

continuing education programs or activities for the past several years; few were among the participants in the last professional seminar that was designed for Lebanese Prosthetists and Orthotists and implemented by WRF in Cyprus in 1986.

The World Rehabilitation Fund will be involved in designing a program for all active P&O practitioners, including those who work in privately owned for-profit service delivery units, to upgrade and update their knowledge and technical skills. The experience of WRF with such training programs for Lebanese Professionals and Technologists over the past several years in Cyprus and Lebanon will facilitate the design and implementation of the various aspects and components of the program which will be done in collaboration with The American University of Beirut, P&O service delivery units, rehabilitation institutions, concerned agencies and organizations and leading professionals. The ongoing Continuing Education Program that is carried out by The Lebanese Syndicate of Physiotherapists, along with the various other professional workshops and seminars that are conducted with technical and material assistance from WRF, serve as a basic example of what may be done and provide valuable first hand experience in this field.

### **1.3- OTHER PROFESSIONAL TRAINING PROGRAMS.**

Prosthetics and Orthotics (P&O) related services are not restricted to the P&O shop and extend beyond what prosthetists and orthotists can do. Physicians, Nurses, Emergency Care workers, Social Workers, Psychologists, Administrators and several other categories of professionals are involved in one way or the other, to different extents, in matters related to P&O services which should be a part of a comprehensive process of rehabilitation services.

Of special importance is the role of Physicians involved with planned or emergency amputations whose knowledge and technical skills determine to a large extent the nature, value and success of P&O services. Orthopedic and General Surgeons are primarily concerned. WRF will collaborate with Medical Schools, The Order of Physicians and leading Hospitals in designing and implementing training seminars and workshops for concerned and interested Orthopedic and General Surgeons to upgrade and update their Knowledge and skills. Similar activities were implemented in Lebanon and Cyprus addressing various matters related to disability and Rehabilitation over the past several years.

Nurses and Physical Therapists are also concerned directly and indirectly with P&O services. They also need to upgrade and update their knowledge and skills. This is particularly important since most local training programs lack enough emphasis on matters related to rehabilitation in general and P&O services in particular. WRF will be involved in the development and introduction of related curricular material into academic and technical training programs and the development and implementation of related seminars and workshops for concerned practitioners.

The extensive experience of WRF with those groups in Lebanon through the various seminars, conferences, workshops and curricular interventions is expected to facilitate the process.

Of definite importance is the potential role of Social Workers, Psychologists and Teachers. Individuals, particularly children, with amputations and mobility problems requiring P&O services are at risk of major social and emotional problems which would influence their potential for obtaining maximum benefit from accessible P&O services. Dedicated seminars, workshops and conferences will be designed and implemented to meet the needs of those professionals.

Related training and development programs and activities will address the particular needs of other professionals involved with the provision and outcome of P&O services. Of particular interest are Managers and Administrators within the various service delivery units. The needs of these professionals are overwhelming. Appropriate training programs will be developed for these categories of professionals in an attempt at improving the efficiency, information systems and management processes of service delivery units.

In addition, WRF will work actively with Universities and Institutions of higher learning to introduce rehabilitation and P&O related didactic teaching and practical training, as appropriate, in undergraduate and post graduate curricula. For example, WRF will work with the three Medical Schools in Lebanon to persuade and assist them in including in their undergraduate medical curriculum an introduction to the principles and practices of prosthetics and orthotics, especially for those students who plan to specialize in surgery, orthopedic surgery, pediatrics, family medicine and emergency medical care.

#### 1.4- OTHER MATTERS RELATED TO PROFESSIONAL DEVELOPMENT:

The World Rehabilitation Fund will be involved in supporting the development of local professional printed matter and publications by concerned professional societies and 'consumer' advocates groups. The experience of WRF with the Professional Journal of The Lebanese Syndicate of Physiotherapists and the news publication by the National Association for the Rights of Disabled People will serve as an model.

In addition special emphasis will be directed towards the creation of a National reference library dedicated to Rehabilitation in general and Prosthetics and Orthotics in Particular. This reference Library will be housed within the Medical Library of the American University of Beirut. Additionally, P&O service delivery units will be encouraged to build their own reference libraries which will be supplied with relevant books and periodicals.

## **2- UPGRADING SERVICES AND IMPROVING LOCAL PRODUCTION CAPABILITIES**

The availability and accessibility of P&O services remains the primary concern of disabled individuals and their families.

As discussed earlier the development of adequate, appropriate and accessible quality services for disabled individuals is among the primary goals of this project.

Plans and efforts to upgrade existing services and improve local production capabilities of prostheses, braces and other related mobility devices and appliances will be among the priorities of the project, primarily, in active collaboration with non-profit service delivery units all over Lebanon.

In addition, appropriate ways of involving the private for-profit sector will be identified. Every effort will be made towards coordination and collaboration with the private sector in order to make use of its capabilities and resources in meeting the over all needs of the population. For this purpose appropriate incentives will be identified.

It is evident that the success of this component of the project is related, to a large extent, to the successful implementation of the above discussed and detailed components related to manpower training and development.

This component of the project will include:

2.1- Provision of needed equipment and supplies to the non-profit service delivery units in order to upgrade their functional capacity and productivity, broaden their range of technical services and improve the quality of their final products.

Emphasis will be on the provision of equipment items and machines that will decrease dependency on elements, components and devices that are manufactured outside the country and on upgrading local production capabilities starting from basic raw materials. The outcome will be a lower cost of services. The long standing hands on experience of WRF in equipping rehabilitation facilities in Lebanon over the past several years will be of great value.

2.2- Providing the material and technical resources for the repair of existing machines and equipment items.

Within this context a special program will be initiated, in collaboration with the active service delivery units, to centralize and / or regionalize repair capabilities, upgrading the skills of service technicians and proper inventory of available parts.

In addition an active ongoing in-service training program will be initiated to familiarize technicians with the potentials, capabilities and exact modes of operation of the sophisticated equipment items that may exist or later be introduced. This is of special importance in view of the fact that a significant portion of the equipment at service delivery units was not purchased through local authorized suppliers who can provide maintenance and

repair services; instead they were direct donations, in kind, from foreign countries and organizations. Quite often, it is evident that the exact potential and capabilities of some of the sophisticated equipment items is not clear to those operating them.

2.3- Providing the framework for exchange of technical and professional information among the various service delivery units through (a) exchange of staff; (b) joint in-service training programs; (c) workshops and seminars; (d) the creation of a technical periodical; etc...

2.4- Providing the incentives and operational framework for centralization and/ or regionalization of complicated and sophisticated production activities. This may be important in justifying major capital investment in sophisticated technology and will decrease redundancy and lower costs.

2.5- Encouraging the development of different particular expertise at different facilities and creation of a system of referral among various facilities.

2.6- Assisting service units in developing management systems with particular attention to financial management. This includes ways and means of obtaining reimbursement for services from third party payers, whenever they exist, and from individuals and their families according to a sliding scale that takes into consideration their financial status and potential. This will have a favorable impact on the financial viability of non-profit and for-profit service delivery units and will allow them to provide quality services to individuals and families with financial resources that fall below a certain level.

### **3- PROFESSIONAL SYSTEMS, LEGAL MATTERS AND QUALITY ASSURANCE**

The third component of the proposed Project gains special significance in view of the chaos that prevailed in Lebanon during the past fifteen years of conflict.

Professional and administrative systems of operation are practically non existent. The concerned Governmental agencies are close to non existent and are helpless if they do exist. The legal system is quite ineffective especially in matters related to the quality of professional services and the rights of the consumers of such services. Thus practically anybody can practice the profession to whatever extent the uneducated and desperate consumers will allow. The result is actual potential for chaos, economic drain and abuse. Such an environment may have an adverse impact on the economic and professional viability of conscientious practitioners who are dedicated to quality services. They find it very difficult to compete, and some times leave the country.

In view of this, effort will be directed towards the following:

3.1- Providing technical assistance towards establishing professional organizations serving the needs and professional interests of workers in the field. The experience of the World Rehabilitation Fund with the creation, institutionalization and development of the Lebanese Syndicate of Physiotherapists, which may serve as a model, will be very helpful. Such professional organizations have the potential of initiating continuing education and manpower development programs. They can also be instrumental in developing locally appropriate and viable rules, regulations and programs governing matters related to professional standards and quality assurance. WRF will make known the professional advantages of such developments. It will provide technical assistance in favor of such efforts along with material assistance for such programs.

3.2- The World Rehabilitation Fund will provide technical and material assistance towards the efforts of Governmental Agencies, Non-Governmental organizations, Universities and Professional groups aiming at establishing the legal framework that governs the practice of the P&O related professions within Lebanon and the standards and requirements governing the training and continuing education programs. The American University of Beirut is expected to spearhead such efforts.

3.3- Support will be made available to efforts to establish consumer organizations and related interest groups. Such groups and organizations can influence the course and pace of events favorably and can provide valuable input into the process of needs assessment, priority setting, design and implementation of services. The experience of WRF with the Lebanese Sitting Handicapped Association and The Friends of The Handicapped Association in Lebanon will prove to be very beneficial.

#### 4- INTEGRATION WITH OTHER REHABILITATION PROGRAMS AND ACTIVITIES

Prosthetic and orthotic (P&O) services are only beneficial if they are part of a comprehensive process of rehabilitation. The artificial limbs or braces and other P&O services, even if technically perfect do not necessarily integrate a disabled individual into functional and productive social life.

Hence, it is important to align Prosthetic and Orthotics programs with other rehabilitation programs. This will be a priority matter that will not be neglected.

It should be noted that WRF has been arranging for, and facilitating P&O services for disabled individuals, in collaboration with the major P&O service delivery units, through the Community Based Rehabilitation Programs that it sponsors in various parts of Lebanon. Moreover, WRF has provided significant

technical input to the P&O service delivery units since these units are part of major rehabilitation institutions which work in close collaboration with WRF and to whom WRF has provided them with major technical and material support over the past few years under the current Emergency Rehabilitation Project that is conducted currently by WRF with financed by AID.

Thus WRF has the commitment and ability to do whatever may be possible, within the context of the prevailing situation in Lebanon, to integrate the proposed components and activities of this project with other ongoing activities and programs in the general field of rehabilitation. This is only appropriate and quite possible since whatever is proposed within the context of this project supplements and complements whatever was achieved and is currently underway.

## **G. PROJECT MANAGEMENT AND IMPLEMENTATION**

### **1. PRIORITIES**

The comprehensive nature of the project and the diversity of the proposed programs and activities entails an active attempt at priority setting taking into consideration the prevailing needs and keeping in mind that the ultimate purpose of the project remains to be the provision of quality P&O services to needy disabled civilians in Lebanon. Such priority setting should reflect the order of emphasis as well as the proportion of requested and allocated funds. It should also be formulated in a modular manner that will allow for a successful integrated implementation of as many components and elements of the project as may be possible and appropriate.

Within this context the proposed components of the project can be divided into two main categories:

#### **a) Category 1**

Project components and elements included in this category will receive a first order of priority in implementation as compared to those included in category 2. This category includes:

- i- The Professional Technologist Training Program (item F-1.1).**
- ii- Continuing Education and Skills Development Programs for Prosthetists and Orthotists (item F-1.2).**
- iii- Continuing Education and Skills Development Programs for Orthopedic and General Surgeons, Nurses, Physical Therapists and Social Workers (item F-1.3).**
- iv- Continuing Education and Skills Development Programs for Managers and Administrators of service facilities (item F-1.3)**
- v- Upgrading Services and Improving Local Production Capabilities (item F-2).**
- vi- Integration with other Rehabilitation Programs and Activities (item F-4).**

- b) Category 2  
- All other components and elements.

In implementing the project priority will be given to the components and elements listed in Category 1. Implementation of these elements and components will have an immediate favorable impact on the quality of Prosthetic and Orthotic services in Lebanon as well as on the availability and accessibility of these services. The result being more accessible and affordable quality services for needy individuals. Components and elements within this category will receive a lower order of priority and will be implemented when conditions permit.

As is evident in the proposed budget the implementation of the elements listed in Category 1 will require more than 80% of the requested funds.

## 2. PROJECT UNITS AND ACTIVITY SITES

WRF will work in partnership with the American University of Beirut and in cooperation with other institutions of higher learning and professional societies and groups in implementing the training and manpower development components of the project.

Appendix 2 shows a listing of all non-profit Prosthetic and Orthotic service delivery units which are scattered in different parts of Lebanon. WRF will collaborate closely with these service delivery units for the implementation of the proposed project. Emphasis will also be made on close cooperation with privately owned service delivery units.

In addition, WRF provides some form of assistance to more than 60 rehabilitation organizations, institutions and / or facilities. Some or all may be helpful during the different phases and within the context of the different components of the project.

In collaborating with the various institutions, organizations, professional groups, service delivery units, etc... within the public or private sector, WRF attempts, and is committed, to build a framework of partnership and mutual responsibility and commitment. Prospective partners and beneficiaries are identified and operational relationships are developed and maintained within the context of the following general rules and guidelines.

a) The social, professional and financial credibility as well as the professional, operational and developmental potential of the prospective 'partner'.

b) The commitment of the concerned party(ies) to provide service to needy individuals irrespective of their age, sex and geographical, ethnic, social and political background.

c) The importance of significant contributions towards the program or activity from the participating party(ies). Such contributions usually take the form of professional expertise,

personnel time, use of physical facilities and available equipment, etc... If accounted for appropriately, the monetary value of such contributions will usually amount to a sizeable and significant proportion of the overall cost of the project or activity.

d) The importance of adequate and credible management systems with emphasis on evaluation, accountability, reporting and financial accounting. Within this context every effort will be made to ensure the ability and the commitment of the concerned party to develop the related management systems appropriately should deficiencies exist.

e) The potential for continuation, and development of the program/activity beyond the extent and duration of the support provided by WRF.

f) The ability to utilize and maintain donated equipment items.

g) Other related guidelines, rules and regulations that are inherent to the specific nature of a certain project or activity.

### **3. PROJECT MANAGERS**

In addition to the concerned WRF staff at the Lebanon and United States offices, different components of the project will be under the jurisdiction of activity managers selected by the different institutions and organizations in charge of that particular component of the project. For example, The Professional Technologist training program will be managed by whomever AUB selects for assuming this responsibility. WRF will, of course, assume responsibility for the overall supervision of the various phases and components of the project.

### **4. PROJECT MANAGEMENT**

#### **4.1 Organization:**

The management of this project will be a joint responsibility of the Lebanon office of the World Rehabilitation Fund and the Head office of the Fund in New York. The component of the project to be implemented in partnership with the American University of Beirut will be under the immediate management of the University with technical assistance, and other forms of input, from WRF as may be necessary and appropriate.

The Director of the Lebanon office of WRF will be responsible for the daily operations of the project. An experienced professional prosthetist / orthotist will be identified and recruited to provide advice as well as to assume responsibilities towards the implementation and management of the project. The services of local consultants will be utilized as may be necessary.

Secretarial, clerical as well as field assistance will be obtained as may be necessary depending on the activity and or program that is being actively implemented. It is important to emphasize that concerned local parties (institutions, organizations, professional societies) usually provide a significant portion of the manpower needs of the activity that they are concerned with.

The American University of Beirut will appoint a Director for the 'Professional Technologist' training program who will be responsible for the implementation of this component of the project. AUB will provide additional management support and supervision as may be necessary. Reporting about this training program will be made directly to the WRF office in Lebanon.

An active ongoing channel of communication will be maintained between the WRF office in Lebanon and the WRF Head office in New York. The head office will provide ongoing supervision and advice on technical, management and financial matters related to the project. Dedicated senior staff members are committed to this purpose including an experienced professional prosthetist / orthotist. Part of the cost of their professional services will be covered from the funds allocated to overhead, the other part will be donated or covered with WRF funds. Additional consultants will be recruited as may be necessary.

#### **4.2 Implementation:**

Implementation processes currently used by WRF in Lebanon in relation to its ongoing programs will be used, developed and adapted as may be necessary, in implementing this proposed project. Such processes were adapted on the basis of the prevailing situation in Lebanon and taking into consideration the potential for dramatic unpredictable changes. So far they have been quite effective.

The general principles governing implementation are as follows: The Lebanon office prepares implementation plans and procedures, in consultation with the concerned local partner(s), within the context of in-depth understanding of needs, priorities and limitations. Such plans are discussed with the WRF head office and with other concerned offices and agencies in Lebanon including governmental officials. Professional consultation is obtained as necessary using the services of local and / or international consultants. This process ends up with a clear framework for implementation which is subject to ongoing evaluation and reconsideration, as may be necessary, should circumstances change.

Emphasis is made on a fair distribution of services and programs according to need and without bias to geographical areas, confessional affiliation or socioeconomic status. Emphasis is also placed on encouraging the development of services and programs in under-served areas of the country.

Project activities and sub-projects are initiated as soon as conditions permit. Hence they may be initiated at various times during the life of the project.

The prevailing situation in Lebanon has not allowed for visits by foreign expert consultants to Lebanon. In the past the closest they got was Cyprus where they participated in seminars and workshops. It is hoped that the improving political situation will allow for the travel of foreign experts into Lebanon where they can provide needed face to face advice and technical assistance.

Financial management, as well as program management of the project is a shared responsibility between the Lebanon office and the WRF head office, with the Controller of WRF in New York having ultimate responsibility for financial matters. All the checks for the payment of project expenses are issued in New York, air expressed to Beirut, to be distributed and liquidated. Periodic financial reports and liquidation documents, as well as program reports, are submitted by the sub-projects, seminars, etc... to the Lebanon office where they are reviewed and evaluated for accuracy and compliance with liquidation conditions and requirements and then submitted to the head office.

#### **H. PROJECT BENEFICIARIES**

Disabled civilians, in Lebanon, in desperate need of prosthetic and orthotic services will be the ultimate beneficiaries from the project. However, professionals, students, families and others will benefit also from the various activities and programs within the context of the project.

In view of this, it is difficult to identify the real limits of the circle of beneficiaries. Professionals as well as students in their various concerned disciplines will benefit from the training programs. In turn patients and individuals seeking their services and help will benefit from their upgraded knowledge and skills. Based on prior experience, it is expected that all concerned professionals in Lebanon will benefit from one or more of the components of the training programs.

Disabled individuals will definitely benefit from the improving skills, upgraded service facilities and systems of operation. This will also be of great benefit to concerned families, to communities and society in general. Analysis of the situation strongly suggests that the project will help non-profit service delivery units to upgrade the quality and expand the range of services to address the majority, if not all, categories of need with increasing efficacy and efficiency. Moreover, upgrading the skills of professionals in the private for-profit facilities will allow for the improvement of services within this sector and may result in cutting costs due to improving efficiency and exposure to other cost saving processes of service delivery.

Adequate and credible statistical information is not available at this stage to allow for a credible estimation of the number of

disabled individuals who will receive P&O services which would not have been possible without this project. It is, however, estimated that the project will expand the capacity of the service units three folds allowing them to meet prevailing needs at a reasonable cost and within a reasonable time frame. In addition the project will have a definite positive impact on the quality and value of the available services.

The process of implementation of the project will allow access to the necessary statistical information that is needed to set reasonable quantified targets particularly relating to the number of disabled beneficiaries. Indicators for the assessment of the impact of the project on the quality of services and the satisfaction of the beneficiaries will be also developed.

As with other WRF programs and activities in Lebanon, assistance and services, within the scope of the proposed programs and priorities, will be made accessible to all concerned, based on their need, without regard to geographical location, religious affiliation or economic status.

#### **I. THE WORLD REHABILITATION FUND'S PROPOSED ACTIVITIES IN THE CONTEXT OF SIMILAR ACTIVITIES UNDERTAKEN BY OTHER ORGANIZATIONS.**

The World Rehabilitation Fund is the only organization involved, for the past several years, in the implementation of a comprehensive rehabilitation assistance and development program all over Lebanon. Other forms of International assistance have taken the form of short term crisis-oriented activities that were very much influenced by prevailing political circumstances. Most of these programs were terminated and or suspended during the past two years.

In implementing its programs and activities, WRF relies on local established and credible institutions or provides assistance in the development of new organizations and or institution wherever the need exists and whenever the potential is evident. In doing so the interests of the communities and the society are served within the context of their own special peculiarities and priorities.

To optimize operations, upgrade knowledge and prevent redundancy, duplication and waste, WRF emphasizes coordination with all concerned institutions, agencies and organizations; native and international. In addition an active process of coordination is maintained with concerned Governmental Agencies and Offices. Details related to this are available in sections K, L and M of this proposal.

## **J. COORDINATION WITH AID OFFICE IN LEBANON**

Every effort will be made to ensure a successful and valuable process of coordination between the WRF office in Lebanon and the concerned staff of the United States Agency for International Development in Lebanon. Within this context regular meetings will be held with concerned AID staff in Lebanon on formal as well as informal basis. This is coupled with the filing of formal written progress reports with the AID office on a regular basis and as matters require. The current favorable relationship between the AID Office in Lebanon and the Lebanon Office of the WRF can serve as a model that can be expanded and developed. Moreover WRF will continue to participate actively in all coordination activities and meetings that are called for by the AID office in Lebanon and the concerned staff of AID are invited to participate in all the meetings, workshops, seminars, conferences and plenary meetings that are conducted or sponsored by WRF in Lebanon. It is important to note that concerned AID staff were invited formally to all the activities related to Lebanon that were conducted by WRF in Cyprus.

Most recently Mr. Ghassan Jamous, the senior AID staff person in Lebanon, participated actively in a general discussion session held in Beirut January 17, 1991 that addressed needs in the field of Prosthetics and Orthotics in Lebanon. This meeting was attended by most of the concerned individuals and agencies active in this field.

## **K. COORDINATION WITH OTHER NON-GOVERNMENTAL ORGANIZATIONS (NGOs) RECEIVING AID FUNDS**

WRF will maintain and develop the current active state of coordination with other NGOs that receive funds from AID. This coordination is formal and informal.

Formal coordination takes the form of active participation in the coordination meetings that are called for by the AID office in Lebanon. Within the context of these meetings there is a dynamic exchange of information, progress reporting and exchange and discussion of ideas, plans and projects. Such meetings have proven to be very helpful.

Other forms of formal coordination includes the sharing of various categories of information about organizations, institutions, programs, projects, difficulties etc... as well as providing expert opinion in reference to some of the concerns of NGOs in reference to matters of disability and rehabilitation.

Informal coordination is based on the personal professional as well as friendly relationships that exist between the staff of the WRF office in Lebanon and the staff of the different NGOs.

It is important to note and emphasize that the different PVOs acknowledge the experience, professionalism and knowledge of the WRF Office in Lebanon as in reference to whatever relates to the General field of Disability and Rehabilitation in General and in Lebanon in Particular. It has been voiced repeatedly during the coordination meeting that are held by AID in Lebanon that funds dedicated to Disability and Rehabilitation are best handled, among the operational NGOs in Lebanon, by WRF.

It is also important to note that WRF has provided direct material and technical assistance to some of these organizations. The material and technical assistance to the Lebanese Red Cross and the American University of Beirut and the technical assistance to Save the Children Federation are an example.

#### **L. COORDINATION WITH OTHER LOCAL AND INTERNATIONAL PRIVATE VOLUNTARY ORGANIZATIONS (PVOs) AND UN AGENCIES**

The role of WRF in the field of Disability and Rehabilitation in Lebanon is very well acknowledged by practically all concerned agencies and organizations. WRF is in continuous contact with various concerned native and international bodies as well as concerned UN Agencies like the World Health Organization, UNICEF, UNDP and UNDRO. WRF is an active participant in various local coordination bodies and has actively contributed to the process of Fact Finding missions of UN Agencies and similar missions sponsored by the International Council of Voluntary Agencies ( ICVA ). Some of the requests for assistance that are presented to these Agencies and Organizations are forwarded to WRF for consideration and action. Moreover, WRF has provided valuable support towards efforts aiming at the creation and institutionalization of various coordination bodies in Lebanon.

#### **M. APPROVAL FROM AND COORDINATION WITH THE GOVERNMENT OF LEBANON**

The immediate and long term role of governmental offices, agencies and service delivery facilities cannot be overemphasized. As part of the current involvement of WRF in Lebanon, special efforts were made, and will continue, to ensure an active, dynamic and valuable process of coordination with concerned Governmental agencies and offices in Lebanon. This, of course, has been increasingly difficult during most of 1989 and 1990 in view of the prevailing violence and turmoil. In spite of this, an ongoing process of active coordination and collaboration continued and is currently active.

This process is highlighted by:

1- The ongoing and updated awareness of the concerned Governmental agencies and offices of the programs and activities of WRF in Lebanon. WRF staff are in active contact with concerned staff of the Directorates of Health and Social Affairs of the Ministry of Health and Social Affairs of Lebanon.

2- Two of the five active Community Based Rehabilitation Projects that are currently funded and sponsored by WRF are conducted by the selected staff of the Directorate of Social Affairs in the Greater Beirut area. Both projects are under the immediate supervision of the Director General of this Directorate.

3- The main offices of WRF in Lebanon are housed within the Faculty of Public Health of the Lebanese University. WRF is in active coordination with the various concerned Faculties of the Lebanese University which is the Public University in Lebanon.

4- WRF staff in Lebanon are frequently consulted by the advisors of the Prime Minister and the Minister of Health on Disability and Rehabilitation about various matters that relate to these fields.

5- Concerned governmental officers and directors are always formally invited to the various activities that are conducted or sponsored by WRF; most of the time they participate actively.

WRF is committed to maintaining and upgrading this active and valuable process of coordination and collaboration.

#### N. COST PER BENEFICIARY

It is very difficult to estimate the cost per beneficiary of such proposed programs and activities. This is due to the fact that the circle of direct and indirect beneficiaries lack clear boundaries. Moreover, the developmental aspect of the proposed project provides it with the potential of being highly cost beneficial with benefits and overall impact extending for a very long period after the completion of the project.

Based on the track record of WRF in Lebanon the cost per beneficiary has been and is expected to continue to be infinitesimal.

In training seminars and workshop the cost is expected to be less than five to ten dollars per beneficiary, paid from the project grant. Equipment provided to P&O service delivery units have a life use of more than ten years, making the cost per disabled beneficiary very small. The proposed professional technologist training program may appear to carry a high cost per trainee; however, such is not the case when matters are placed into perspective and consideration is made of the overwhelming number of needy individuals who will be served by the graduates of the program during their professional career.

## **O. EXPECTED ACHIEVEMENTS AND ACCOMPLISHMENTS**

### **1. Expected Improvement of Status of Beneficiaries.**

The expected immediate and long term achievements of the project are many.

As discussed earlier, upgrading the knowledge and skills of professional staff will have a significant favorable impact on the quality of services and will decrease the extent and duration of morbidity and suffering. In doing so it will decrease related material and non material social expenses and improve the chances of disabled individuals to return to active, productive and fulfilling social life.

The provision of assistance to institutions whether technical or in the form of equipment items will improve their efficiency, capacity and range of services. This will, of course, reflect favorably on needy disabled individuals and, families and on the overall process of rehabilitation.

In addition the development of systems of quality assurance and standards of training and practice will ensure a needed uniformity in the quality of services and prevent exploitation and abuse.

Of special interest is the potential of a regional perspective to the project through the proposed professional technologist training program to be implemented at the American University of Beirut. This was discussed earlier (Section F - 1.1). Should this happen, the outcome will be very favorable for the University, Lebanon, the profession and needy disabled individuals in the region.

### **2. Duration of Support**

The proposed project will extend for a period of three years. The first three years are critical in view of the nature of the project and the proposed professional technologist training program; in three years there will be experience with two cycles of training producing two groups of graduates. In addition there will be experience with one class of graduates after about one year in service.

Effort will be made to ensure additional funding for a fourth year. This is important to allow for further development of training programs and services and provide solid grounds that will be helpful in transforming the professional technologist training program into a regional program.

### **3. Measurement of Progress**

Detailed operational objectives, targets and activity schedules will be developed as an integral part of the process of implementation.

Related activities and preparations for various programs have started even before securing funds. Contacts and meetings are held

in Lebanon in reference to the prospective phases and components of this project. The American University of Beirut has been involved actively in staff recruitment, and other administrative preparations, for their component of the project; even a prospective director of the training program has been identified.

The ongoing process of evaluation, discussed later will allow for an ongoing measurement of progress and identification of actual and potential problems, obstacles and difficulties.

#### **4. Partnership with Local Groups**

Building the capabilities and expanding the potentials of local groups and organizations is a priority for WRF. Such has been the track record of WRF in Lebanon over the past several years. This is especially important in order to ensure the continuation of the various projects and programs beyond the duration of the material support of WRF. Such is important in view of prevailing uncertainties especially in reference to availability of funds.

WRF continues to work with more than sixty institutions and organizations in Lebanon to ensure optimal and uninterrupted implementation of the various programs that it sponsors. The outcome has been very favorable and the experience very interesting and rewarding.

For this proposed project, similar policies, principles and practices will be followed with concerned service institutions and organizations, professional and consumer groups, and institutions of higher learning.

#### **P. EVALUATION**

Ongoing evaluation is an integral part of the operation of all rehabilitation related projects and activities, especially projects of the nature of this one.

Different approaches are used in the evaluation process which is adversely influenced by the virtual absence of any credible nationwide baseline information and plagued by problems related to the absence of an official census in Lebanon since 1932

Information systems will be developed for each of the components and significant activities of the project. Such systems of information are used for management as well as evaluation purposes. In addition activities and programs can and will be evaluated by the immediate beneficiaries. A particular example is the training programs, seminars and continuing education programs; these can be evaluated by the various groups of participants as to quality, pertinence and appropriateness.

Another form of evaluation takes into consideration favorable changes in the availability, accessibility, utilization patterns and scope of P&O related services, as well as the perceived

satisfaction of disabled individuals with the provided services and the impact of the service on the process of rehabilitation of the beneficiary. Evaluation also takes into consideration changes in the average unit cost of different kinds of services; this may prove to be very difficult should dramatic fluctuations in the local currency persist.

Of particular importance in the evaluation process is the continuous input that is received from concerned organizations, institutions, agencies, offices as well as consumers during formal and informal discussions and encounters. Of special significance are the related discussions during the periodic coordination meetings sponsored by the AID office in Lebanon.

Usually no specific amounts of funds are dedicated to evaluation. Rather such costs -- staff time, secretarial services, mailing and communication costs etc... -- are an integral part of program operations.

Information about the details of the implementation of the project will be made available and readily accessible to AID staff in Lebanon and the US. Periodic formal evaluation sessions will be held with AID staff on regular basis and as may be needed. In addition, every effort will be made to facilitate and ensure the success of any evaluation activity or program that will be conducted by AID.

#### Q. SUSTAINABILITY

The major emphasis of WRF sponsored programs in Lebanon will continue to be directed towards ensuring, to the maximum extent that may be possible, the sustainability of the supported sub-projects and programs beyond the duration of WRF sponsorship and AID funding. Within this context emphasis will be made on building into the programs and activities the methods and mechanisms that will be utilized for sustaining the activity beyond the duration of agreed upon support.

In addition, in decision making about providing support to proposals under this project, WRF will take into consideration matters that are conducive to growth and development of the project over time. Within this context WRF provides partner organizations and institutions with technical assistance and advice in their efforts to have access to a multitude of financial resources and improve their viability through (a) the development of income generating projects; (b) involvement with aggressive fund raising activities within their communities and catchment areas; (c) lobbying for additional governmental commitment which will be reflected in the allocation of governmental funds as well as priority setting when international assistance is requested; (d) developing credible relationships with other funding agencies and organizations and (e) ways and means of marketing their programs and services.

Within the particular context of this project, the professional training program which will be done in partnership with the American University of Beirut has an excellent chance of continuing and developing especially if conditions allow for it to evolve into a regional program for training. Success with this program, which is highly probable, will encourage AUB to get involved with other manpower training programs in the field of Rehabilitation and related fields.

In addition, and also within the context of this project, other elements have very high chances of developing into longstanding activities that may get to be self financing. The improving financial viability of the continuing education programs of the Lebanese Syndicate of Physiotherapists that is sponsored by WRF serves as an encouraging example.

#### **R. REPORTING**

Periodic progress reports are submitted on a weekly basis, or more frequently if necessary, by the Lebanon office to the head office of WRF. Periodic reports are also submitted by the Lebanon Office to the AID office in Lebanon. In addition the Lebanon office makes every effort to advise the AID office in Lebanon about developments, problems and or potential difficulties, as frequently as may be necessary, through formal and / or informal personal communications.

The WRF head office will submit periodic progress reports to AID offices in Washington and Lebanon. In addition, special progress reports will be submitted covering developments that may be considered out of the ordinary, or which are felt to be of immediate benefit or interest to AID.

Financial status reports will be submitted, as frequently as may be required, by the WRF head office to AID.

#### **S. CONCILIATION VALUE OF THE PROJECT**

Since the removal of prejudice is a key factor in the integration of people with disabilities into the mainstream of their communities and society, WRF includes in all its programs in Lebanon, and elsewhere in the world, efforts to break down discrimination against children and adults who have disabling conditions. Sometimes these efforts help in overcoming discriminatory practices with respect to other groups of people.

Also, WRF brings together, through its various programs and educational seminars, thousands of professional and lay people from all confessional groups in Lebanon. Through this project, WRF is glad to help realize another of AID's interests -- That the projects it supports promote inter-ethnic and inter-confessional communications and action.

**T. BUDGET:**

The funds that are requested by the World rehabilitation Fund, Inc., for this project over a period of three years amount to a total of 2,173,323.00 U.S. Dollars to be used for the implementation of the various phases and components of this project. These funds will be used as follows:

- 1- The Professional Technologist Training Program to be implemented by the American University of Beirut ( section F-1.1 ). This includes: salaries of the Director and lecturers, teaching and training items and equipment, related supplies, insurance, housing and miscellaneous expenses related to the well being of the trainees, travel and staff development activities. Budget details are presented in section U.  
Additional funds of up to 15% of the proposed budget for this training program will be made available to AUB by WRF, from the funds allocated for overhead, to cover certain institutional costs of the university.  
The total over a period of three years: 334,846.\$
  
- 2- The Continuing Education and Skills Development Program ( section F-1.2 ). This will cover various expenses related to seminars, conferences and workshops to be conducted in Lebanon as part of a comprehensive continuing education and skills development program for practicing Prosthetists and Orthotists in Lebanon.  
The total for a period of three years : 200,000.\$
  
- 3- Educational programs related to other professionals involved in the process of providing quality P&O services including Physicians, Nurses, Physical Therapists, Administrators, Social Workers, Psychologists, School Teachers. In addition, the introduction of P&O and Rehabilitation related teaching in Academic Curricula of Schools of Medicine, Nursing, Public Health and Social Work ( section F-1.3 ).  
The total over a period of three years: 150,000.\$
  
- 4- Other matters related to professional development including equipping and supplying professional libraries; assistance to emerging and developing professional organizations; support to professional publications; (section F-1.4).  
The total for a period of three years: 75,000.\$
  
- 5- Upgrading services and improving Local Production Capabilities. This relates to the details of the various items as presented in section F- 2 of this document.  
The total for a period of three years: 600,000.\$

- 6- Upgrading professional systems and addressing legal matters and matters related to quality assurance. This will cover the expenses of the various programs and activities as detailed in section F-3 of this document.  
The total for a period of three years: **75,000.\$**
- 7- Provision of technical and consultative services from WRF in developing: (a) The content of the Professional training programs, continuing education programs and appropriate university curricula; (b) New services and appropriate methods of delivery; (c) Relevant legislation; (d) Community action programs on behalf of children and adults; (e) Appropriate preventive programs; (f) programs related to facilitating the employment of adults with disabilities. Printed technical material, training devices, audio-visuals, etc... are provided in connection with consultation and technical assistance. This includes International travel and related expenses of key consultants from the U.S.A., should conditions permit, and short term overseas faculty training programs for key professionals and decision makers.  
The total for a period of three years: **100,000.\$**
- 8- Project initiation, implementation, management, supervision and evaluation in Lebanon. This includes various expenses related to professional and clerical staff, office space, office equipment, maintenance, communications, transportation, public relations, insurance etc...  
The total for a period of three years: **275,000.\$**
- 9- International communication, US base supervision management and administration:  
The total for a period of three years: **80,000.\$**
- 10- Overhead: 15% applying to all items **283,477.\$**

**TOTAL OVER THREE YEARS: 2,173,323.\$**

Additional financial details on each item of the budget are noted in Table 1.

**TABLE 1**

<b>THREE YEAR BUDGET DETAILS</b>				
<b>BUDGET ITEM / YEAR</b>	<b>FIRST YEAR</b>	<b>SECOND YEAR</b>	<b>THIRD YEAR</b>	<b>TOTAL</b>
ITEM 1	136500	108412	89934	334846
ITEM 2	50000	90000	60000	200000
ITEM 3	40000	70000	40000	150000
ITEM 4	25000	30000	20000	75000
ITEM 5	200000	350000	50000	600000
ITEM 6	20000	35000	20000	75000
ITEM 7	15000	50000	35000	100000
ITEM 8	95000	105000	75000	275000
ITEM 9	30000	30000	20000	80000
SUBTOTAL	611500	868412	409934	1889846
OVERHEAD: 15% APPLYING TO ALL ITEMS				283477
GRAND TOTAL				2173323

**U. THE ROLE OF THE AMERICAN UNIVERSITY OF BEIRUT**

The American University of Beirut ( AUB ) will play an important role in the implementation of the various aspects of this project particularly the parts that relate to Manpower Development.

Primarily AUB will be responsible for the implementation of a two year technical training program aimed at graduating adequately and appropriately trained technologists in the general field of prosthetics and orthotics. Within this context AUB will be responsible for the following:

- 1- Providing the physical facilities, professional manpower and support staff and systems that are necessary to initiate and implement a two year "Professional Technologist" training program in Prosthetics and Orthotics. The proposed program will start with ten trainees. It is detailed in Appendix 3. It is important to note that the proposed program is based on the diverse and long experience of WRF in manpower development programs in the field of Prosthetics and Orthotics in various developed and developing countries.

- 2- Identification and development of ways and means that necessary to ensure the continuation of the training program beyond the duration of the Grant, taking into consideration prevailing needs.
- 3- Initiating, developing and optimizing a process of cooperation and collaboration between AUB and the various P&O service delivery units in order to make use of these units as training sites and tap the resources of their active professional staff in favor of upgrading the training program. Special emphasis will be made in preparing the professional and technical environment for optimal integration of the graduates.
- 4- Identification of applicants and selection of candidates for the two year training program taking into consideration the importance of addressing needs and providing services in every area in Lebanon.
- 5- Establishing an ongoing process of evaluation of the training program and the appropriateness of its details, processes as well as its final product to the needs of the country, taking into consideration the demographic and the socioeconomic situation and forecast in Lebanon.
- 6- Introducing rehabilitation and P&O related didactic teaching and practical training, as appropriate, in the undergraduate curriculum as well as residency training programs of The Faculty of Medicine. Related programs will be also introduced into the undergraduate and graduate curricula of the Faculty of Health Sciences and the School of Nursing.
- 7- Starting a professional library dedicated to rehabilitation in general and to P&O related matters in particular.
- 8- Initiation of and involvement with research projects related to Rehabilitation and P&O related needs and services.
- 9- Initiating a nationwide process aiming at setting academic and professional standards that govern the training of the various manpower categories that are needed to provide optimal P&O services in Lebanon.
- 10- Providing assistance in other matters relating to manpower development with particular reference to continuing education programs for the various manpower categories involved in the provision of P&O services.
- 11- Providing quarterly progress and evaluation reports to WRF about the training program and related matters.

Table 2 reflects the Budget as proposed by the American University of Beirut for implementation of the noted university based professional technologist training program (Section F-1.1). It is evident, and expected, that the value of the contributions of AUB to the success of the project in general, and the training program in particular, will be higher than what is noted in the proposed budget.

**TABLE 2**

<b>BUDGET ITEM / YEAR</b>	<b>FIRST YEAR</b>	<b>SECOND YEAR</b>	<b>THIRD YEAR</b>	<b>TOTAL</b>
<b>ACADEMIC &amp; PROFESSIONAL STAFF</b>	<b>16760</b>	<b>20112</b>	<b>24934</b>	<b>61806</b>
<b>PROGRAM DEVELOPMENT</b>	<b>9000</b>	<b>9500</b>	<b>9500</b>	<b>28000</b>
<b>TRAINEE SUPPORT(1)</b>	<b>35740</b>	<b>53800</b>	<b>30500</b>	<b>120040</b>
<b>SUPPLIES</b>	<b>25000</b>	<b>25000</b>	<b>25000</b>	<b>75000</b>
<b>EQUIPMENT</b>	<b>50000</b>			<b>50000</b>
<b>SUBTOTAL</b>	<b>136500</b>	<b>108412</b>	<b>89934</b>	
<b>GRAND TOTAL</b>				<b>334846</b>

(1) This includes: Housing, Food, Uniforms and Health Insurance.

## APPENDIX 1

### PROSTHETIC AND ORTHOTIC SERVICES IN LEBANON

A preliminary survey about Prosthetics and Orthotics Services in Lebanon was conducted towards the latter part of 1990.

This activity included:

- 1- A basic general questionnaire that was designed to be completed by the various known service delivery units in Lebanon that operate as part of not-for-profit organizations and/or institutions.
- 2- Visits to each of the concerned facilities.
- 3- Some visits to the privately owned and operated service outlets.
- 4- Extensive discussions with concerned Governmental officials, Administrators, Professionals, Technicians, Beneficiaries etc...

Out of the 10 known non-profit service delivery facilities 8 responded by completing various parts of the questionnaire (Table 1). It is important to note that several small fitting and repairs outlets may exist as part of rehabilitation facilities; these small facilities are not thought to have a significant impact on the status of services.

Anywhere between 8 and 10 privately owned and operated Prosthetic and Orthotic shops are operational in different parts of Lebanon. The status of these facilities is not well known.

#### I- OPERATIONAL STATUS:

The current operational status of all the listed non-profit service delivery units is difficult to assess. It is fair to say that all are currently operational providing some kind of a service. However, their operational status is extremely limited by:

- 1- Lack of operational funds.
- 2- Deficient, damaged or poorly maintained and repaired equipment.
- 3- Unaffordable services.
- 5- Various manpower related problems.

The operational status and related factors are further influenced, in an adverse manner, by the deteriorating socioeconomic situation, the lack of International assistance and the ever increasing brain drain.

## II- PROFESSIONAL STAFF:

1- The 8 service units that responded to the questionnaire are staffed by not more than 20 individuals whose employment status range from part to full time. Of the 20 only 6 or less have what may be considered as adequate professional training. The rest acquired their skills by some form of informal on the job training process.

2- All the skilled and appropriately trained persons have some form of a "private practice" where they provide services to whomever can afford on a private fee-for-service basis. This is resulting in an ever decreasing contribution from such skilled professionals to the services of not-for-profit service delivery units.

3- All service delivery units note that they are seriously understaffed for one or more of four reasons:

- a) The lack of adequate funds to attract qualified professionals, if they can be located on the local market.
- b) The tremendous brain drain out of Lebanon.
- c) The exodus of expatriate staff that used to provide a significant amount of services and skills on a voluntary kind of arrangement.
- d) The lack of local training programs.

4- Practically all respondents considered their staff to have a suboptimal level of training and qualification, at best.

5- There are no continuing education or staff development activities or programs at the institutional or national level. The last such program that was attended by some of the professionals was the Seminar organized by W.R.F. in Cyprus in 1986. In addition to this, interested professionals lack access to continuing education materials such as books, journals, video tapes etc...

6- There is no legal or professional framework that governs matters related to the skills and qualifications of the various categories of professional and technical persons that are allowed to provide Prosthetic and Orthotic Services, no governmental rules and regulations and no professional societies or organizations.

## III- EQUIPMENT AND PHYSICAL FACILITIES:

1- Except for the Sidon facility none of the facilities in Lebanon were designed to provide comprehensive Prosthetics and orthotics services. This is resulting in major problems related to the management, expansion and overall efficiency of these units. Moreover, none of the existing facilities can expand in space, equipment and range of services without facing serious problems mainly related to the internal and external physical structure of the building.

2- The existing equipment is in part not utilized to its maximum potential. This is due to quantitative and qualitative lack of skills and support resources. In several units, also, the manufacturing and assembly line is not complete.

3- The ability to repair equipment locally is extremely limited. A significant portion of the equipment items were donated as such without due concern to the existence of a local dealership or skills for repairing them. Moreover, spare parts are extremely expensive and very difficult to find on the local market.

4- A significant portion of the technical and professional staff do not appreciate the full capacity and potential of the equipment items they have at hand. They were never trained when the equipment was supplied.

5- Management processes within practically all institutions do not allow for due consideration and adequate budgeting for preventive maintenance.

6- There is a tremendous shortage of funds for the repair of physical facilities that have deteriorated or have been damaged by war.

7- It is practically evident that most of the units were equipped haphazardly with no clear plan as to the operational and service objectives of the facility and the potential for cooperation with other facilities.

#### IV- MANAGEMENT AND ADMINISTRATION:

There are obvious and overwhelming deficiencies in the management and administrative processes and systems within the various service delivery units.

1- There are no clear administrative processes, organizational charts, delineation of authority, responsibility and accountability.

2- Appropriately trained managers/administrators do not exist.

3- Records are very poor, quality assurance processes are never heard of and statistics are practically non existent. There is a wealth of data but very scarce information.

4- Managerial skills are evidently poor. Few know how to write a report or a proposal. Budgeting, financing, inventory, cash flow, needs assessment, coordination etc.. do not seem to be within the sphere of concern of most of the service units.

5- Little attention is devoted to the potential of conflict of interest due to the fact that most senior professionals have their private for-profit service outlets.

**V- CAUSES OF DISABILITY:**

The individuals that were served during the period covered by this survey were mostly disabled by war or other causes that were aggravated by war. Following is a distribution of the served individuals by cause of disability. Refer to Figure 1.

<u>CAUSE OF DISABILITY</u>	<u>%</u>
a- Direct War Injuries	65%
b- Accidents and Injuries not related to War	7%
c- Congenital Malformations	10%
d- Communicable Diseases	18%
	<hr/>
	100%

**VI- SERVICES:**

1- All service delivery units felt that they are at best able to meet only part of the needs. All felt that there are categories of needs that they cannot even address at this stage. The average estimate that is based on a professional impression is that less than 50 % of the needs are adequately met. It is important to note that there is a lack of solid and credible data in reference to this matter.

2- All units feel that they can meet all needs in their catchment areas provided they have more manpower that is adequately trained, more equipment, more supplies and adequate funds.

3- Two of the responding units claimed that they are currently working at full capacity. The rest felt that inspite of their currently limited operational capacity they are far from reaching the limits of their capacity mainly because needy individuals cannot even afford the subsidized services.

4- Practically all the parts and raw materials are imported and most of the services are to assemble the parts together and/or mold the raw materials. There is very little, if any real manufacturing that goes on. This is resulting in a very high cost which is not affordable to the majority.

5- Seven of the 8 institutions that responded to the questionnaire reported providing Prosthetics and orthotics related services to more than 1128 needy disabled individuals belonging to different age categories during the period from January 1, 1989 to January 1, 1991. Most of these individuals received several 'units' of service during this period. A total of 1221 'units' of service

were reported by the seven institutions during this period. Figures 2 to 8 reflect some of the details about these services as well as the details about the age and sex distribution.

It is important to note that these figures are based on the response of the units to the questionnaire and not on a scientific analysis of the records of the concerned institutions.

These figures, which may be expected to be inflated, strongly suggest that the needs of the population are only partially met taking into consideration that the estimated number of 'new' injuries, requiring prosthetics and/or orthotics services since January 1989, are more than 2500.

Within this context it is estimated that the operational service delivery units are meeting much less than 50% of the needs of the population.

6- There is no credible information about the quality of the provided services and their appropriateness. A lot of circumstantial and some direct evidence suggest serious problems in relation to these matters.

#### VII- RELATIONSHIP BETWEEN INSTITUTIONS:

Although all Institutions express interest in collaboration and cooperation very little is done and it is obvious that collaboration and coordination should be improved. There is also a consensus that a lot needs to be done in reference to exchange of skills, data, and information as well as to creating "assembly lines" among Institutions as well as the centralization or regionalization of certain services and manufacturing processes.

#### VIII- FINANCING:

There is agreement among all concerned institutions that the prevailing system that governs the financing of services is inadequate and plagued with problems:

- a) International assistance is unpredictable whether in cash or in kind.
- b) Out of pocket payments by beneficiaries cannot be relied upon due to the deteriorating socioeconomic status and decreasing effective value of the Lebanese currency.
- c) The concerned Government Agencies and/or units have very limited budgets.
- d) The biggest third party payer in Lebanon namely The Social Security Fund has very vague provisions in reference to this matter.

All of this is compounded by the escalating cost of services, imported parts and raw materials together with a strong private sector and the lack of any quality assurance processes and systems.

Matters are further aggravated by evidence of inadequate management and administrative practices, patient ignorance and the very high vulnerability of the system to abuse.

In view of this there is agreement on the need to:

i) Address matters related to financing within the context of a National perspective with direct involvement of, and sponsoring by, a dedicated Governmental Agency.

ii) Provision of International assistance with a long term developmental perspective aiming at upgrading manpower and material resources, upgrading local manufacturing skills and abilities, cutting costs, self reliance and the development of systems of management, evaluation and quality assurance.

#### IX- NEEDS:

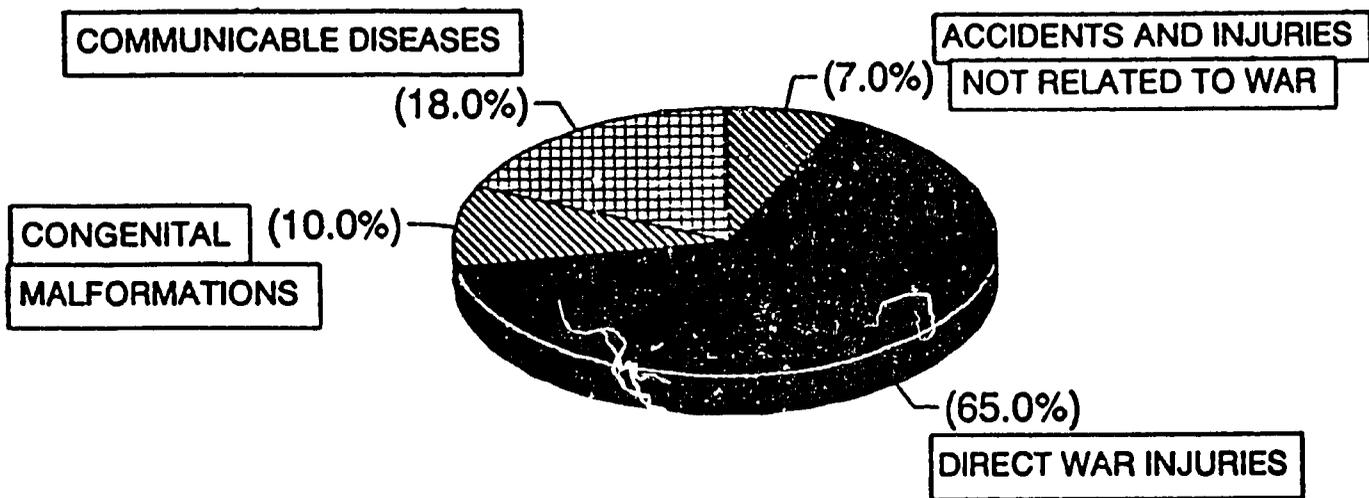
The needs as expressed in the responses to the questionnaire as well as was evident from our discussions with concerned individuals and professionals is overwhelming especially in relation to long term developmental programs. Each institution presented a long list of needs covering equipment items, technical assistance, funds, spare parts and supplies, training and manpower development, books and journals, etc..., etc...

**TABLE 1**

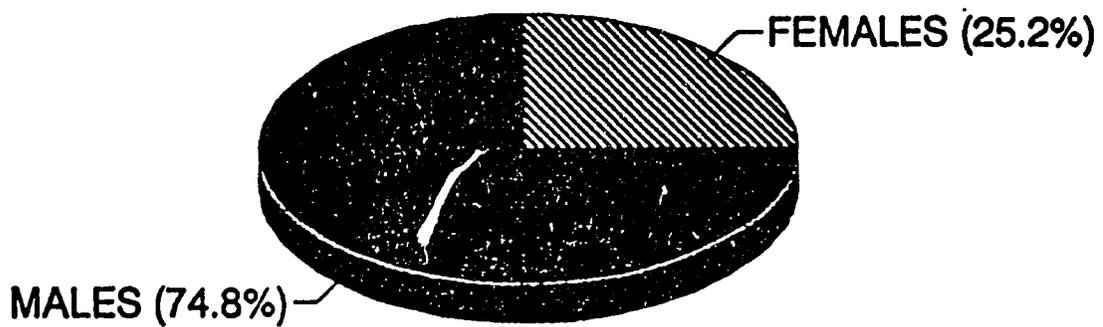
<b>Name of Service Delivery Unit</b>	<b>Location</b>	<b>Completed Questionnaire</b>
1- American University of Beirut Medical Center	Beirut	YES
2- Beit-Chebab Institution	Beit Chebab Meten District	YES
3- Berbir Medical Center	Beirut	YES
4- Cortbawi Institution	Daroun Keserouan	YES
5- Iris Franjieh Institution	Zgarta North Lebanon	YES
6- Modern Center for Rehabilitation of the Handicapped	Sidon South Lebanon	YES
7- Mount Lebanon Rehabilitation Center	Abey - Aley Mount Lebanon	YES
8- Prosthetics and Orthotics Center	Tripoli North Lebanon	YES
9- AL-Kafaat Institution	Hadath Beirut	NO
10- Lebanese Welfare Ass. For the Handicapped	Beirut	NO

# CAUSES OF DISABILITY

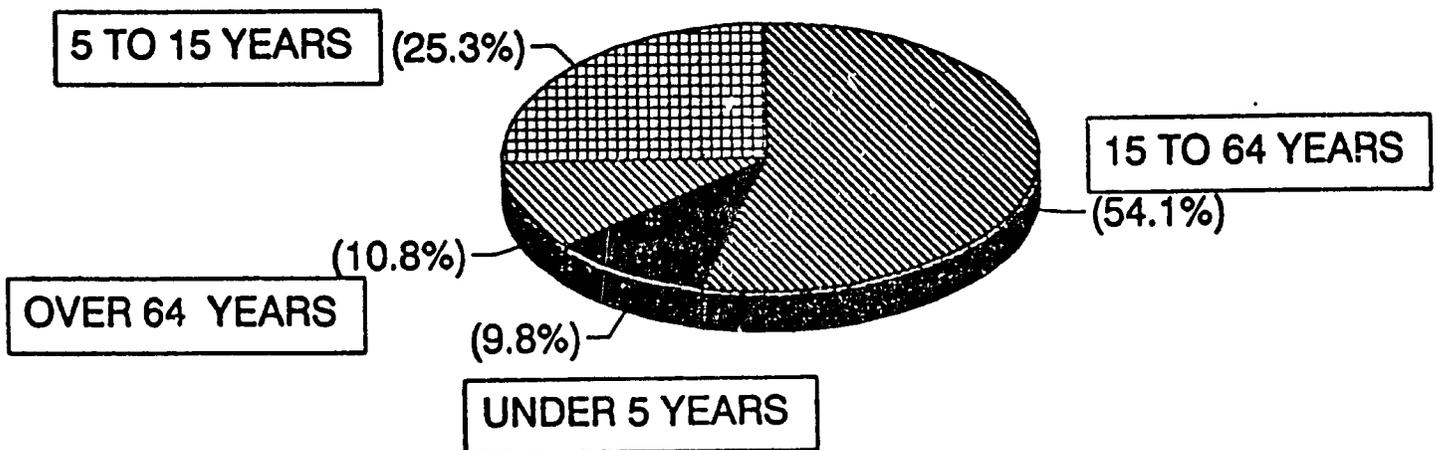
ALL AGE GROUPS      LEBANON 1989 - 90



# DISABLED INDIVIDUALS DISTRIBUTION BY SEX -LEBANON 1989 - 90



# DISABLED INDIVIDUALS DISTRIBUTION BY AGE LEBANON 1989-90

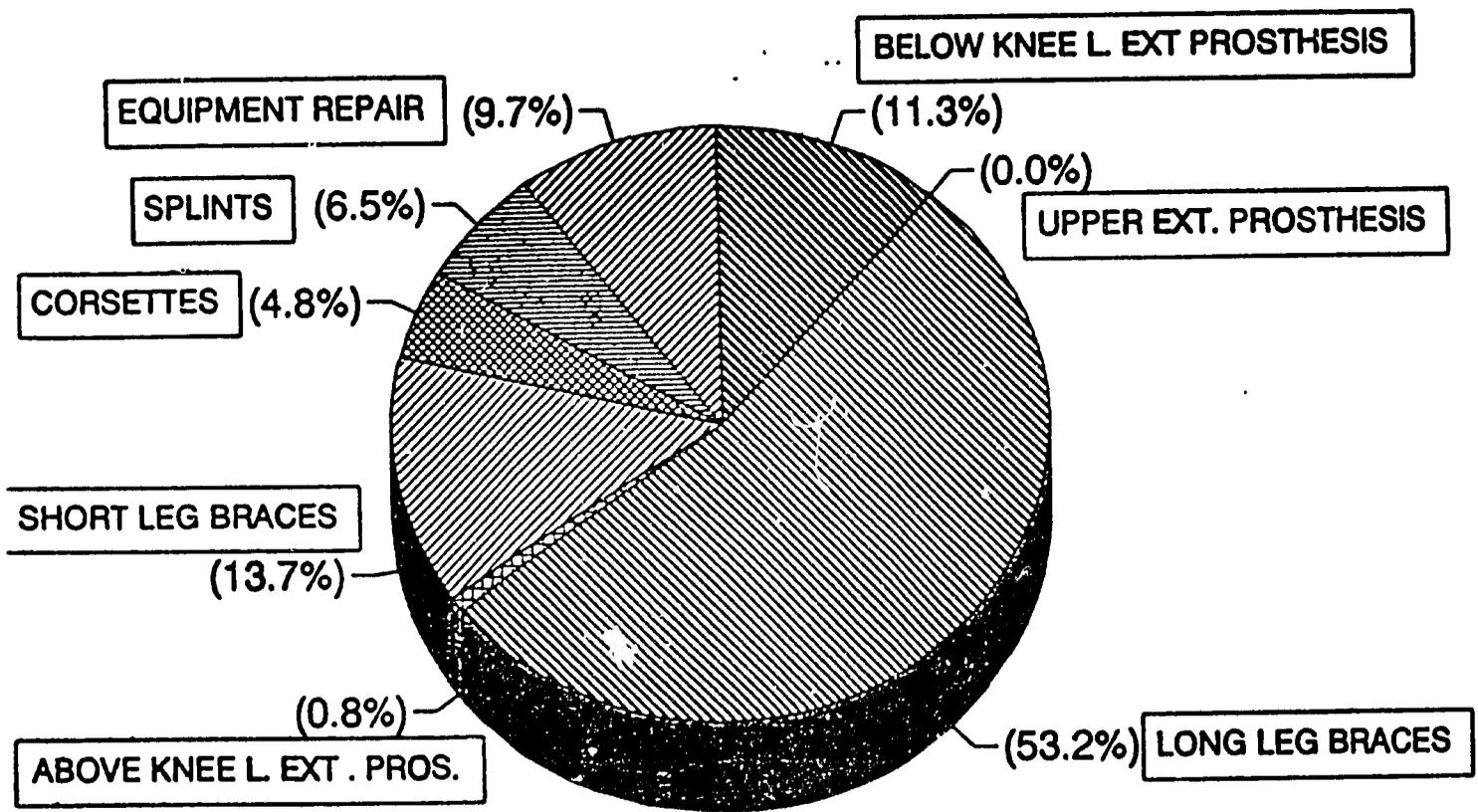


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APPENDIX 1 FIGURE 3

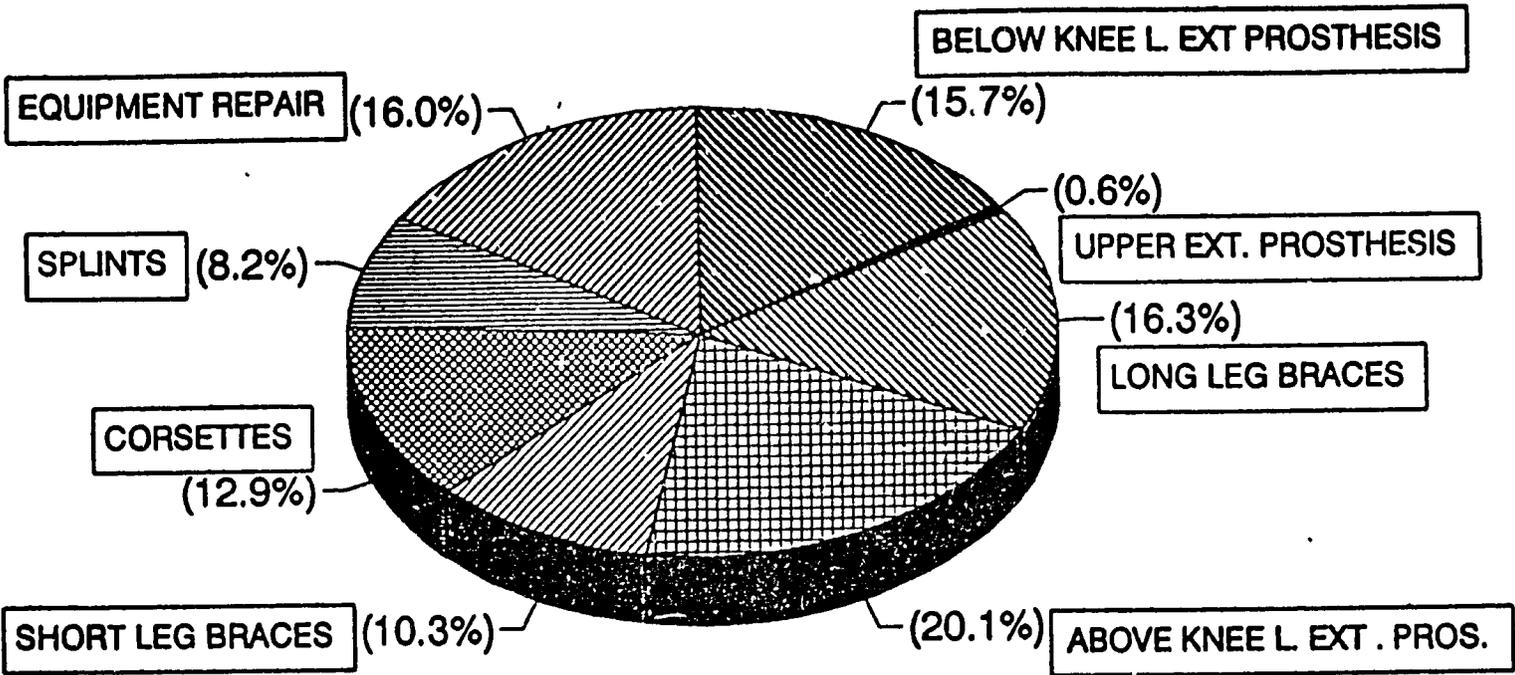
# CATEGORIES OF P&O SERVICES

## AGE GROUP: UNDER 5 LEBANON 1989 - 90



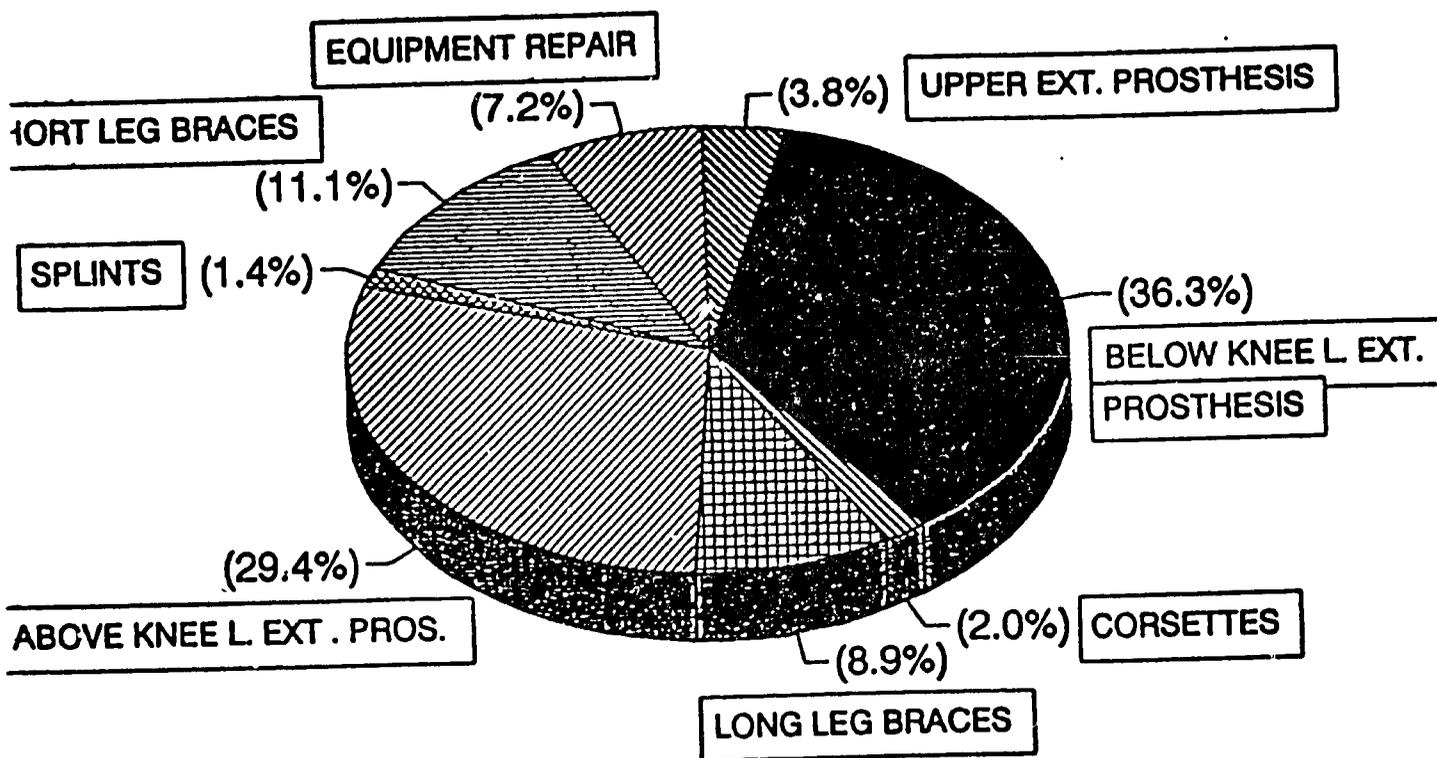
# CATEGORIES OF P&O SERVICES

AGE GROUP: 5 TO 14 LEBANON 1989 - 90



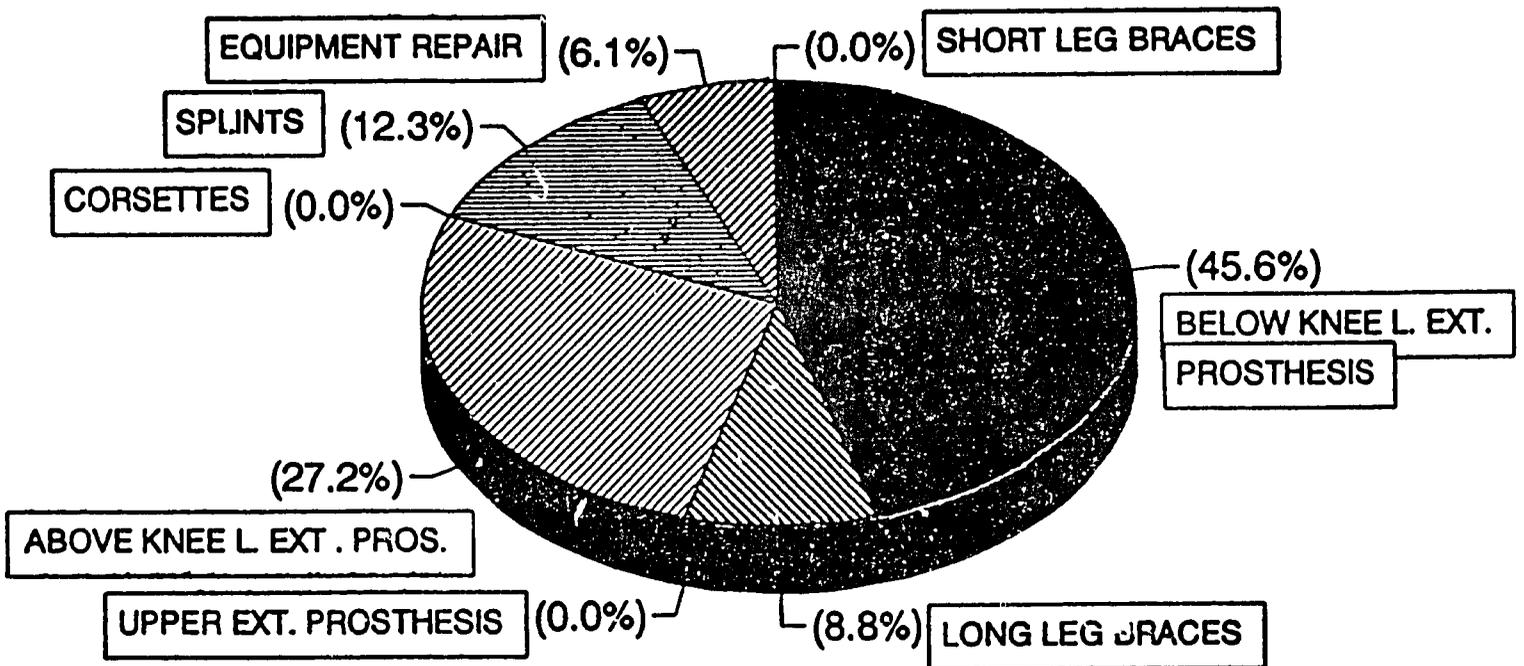
# CATEGORIES OF P&O SERVICES

AGE GROUP: 15 TO 64 LEBANON 1989 - 90



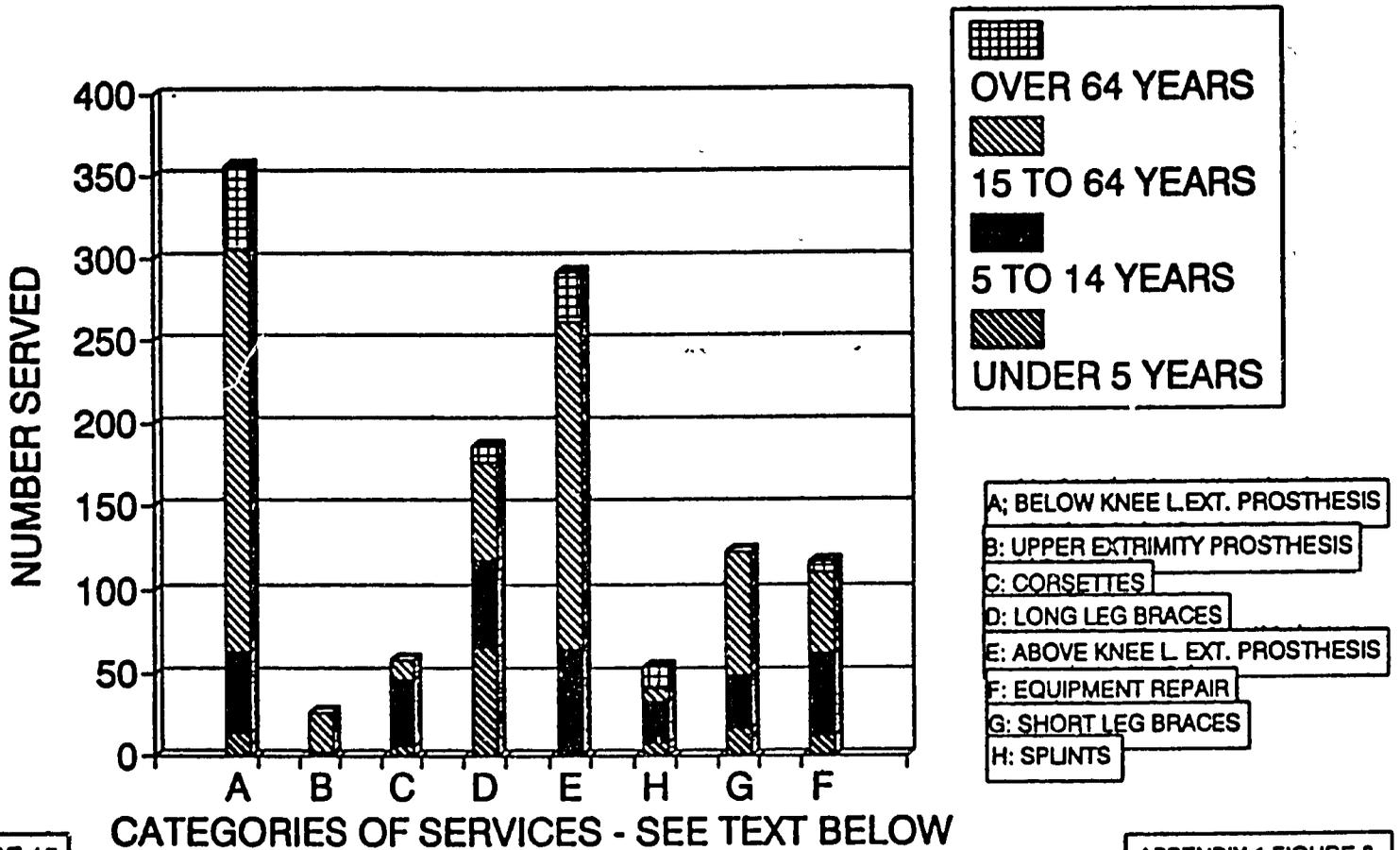
# CATEGORIES OF P&O SERVICES

AGE GROUP: OVER 64 LEBANON 1989 - 90



# CATEGORIES OF P&O SERVICES

AGE GROUP: ALL AGES LEBANON 1989 - 90



## APPENDIX 2

<b>Name of Service Delivery Unit</b>	<b>Location</b>
1- American University of Beirut Medical Center	Beirut
2- Beit-Chebab Institution	Beit Chebab Meten District
3- Berbir Medical Center	Beirut
4- Cortbawi Institution	Daroun Keserouan
5- Iris Franjieh Institution	Zgarta North Lebanon
6- Modern Center for Rehabilitation of the Handicapped	Sidon South Lebanon
7- Mount Lebanon Rehabilitation Center	Abey - Aley Mount Lebanon
8- Prosthetics and Orthotics Center	Tripoli North Lebanon
9- AL-Kafaat Institution	Hadath Beirut
10- Lebanese Welfare Ass. For the Handicapped	Beirut

# APPENDIX 3

## PROGRAM OUTLINE

TWO YEAR "PROFESSIONAL TECHNOLOGIST" TRAINING PROGRAM  
IN PROSTHETICS AND ORTHOTICS  
AMERICAN UNIVERSITY OF BEIRUT  
BEIRUT- LEBANON  
A JOINT PROJECT BETWEEN  
THE AMERICAN UNIVERSITY OF BEIRUT  
AND  
THE WORLD REHABILITATION FUND

### FIRST YEAR

	HOURS LECT/PRACT
<b>QUARTER 1</b>	<b>160/100</b>
1-ORIENTATION	40
2-MATHEMATICS	40
3-GENERAL BIOLOGY	40
4-PSYCHOLOGY	30
5-P&O SHOP TECHNIQUES	10/100
<b>QUARTER 2</b>	<b>160/100</b>
1-MYOLOGY-OSTEOLOGY	50
2-BASIC PHYSICS	40
3-GENERAL CHEMISTRY	40
4-P&O SHOP TECHNIQUES	10/100
5-INTRODUCTION TO REHABILITATION	20
<b>QUARTER 3</b>	<b>90/350</b>
1-MECHANICS	30
2-BIOMECHANICS	30
3-BELOW KNEE PROSTHETICS	20/200
4-BELOW KNEE ORTHOTICS	10/150
<b>QUARTER 4</b>	<b>10/450</b>
1-COMPONENT DESIGN & FABRICATION	10/100
2-CLINICAL AFFILIATION	/350

=====

**SECOND YEAR**

	<b>HOURS LECT/PRACT</b>
<b>QUARTER 5</b>	<b>120/300</b>
1-BASIC PHYSIOLOGY	50
2-PROPERTIES OF MATERIALS	30
3-SPINAL ORTHOTICS	20/150
4-ABOVE-KNEE ORTHOTICS	20/150
<b>QUARTER 6</b>	<b>100/350</b>
1-PATHOLOGY	40
2-PSYCHOLOGIC ASPECTS OF PHYSICAL DISABILITY	30
3-ABOVE-KNEE PROSTHETICS	20/150
4-CLINICAL PROSTHETICS & ORTHOTICS : BELOW-KNEE	10/100
<b>QUARTER 7</b>	<b>110/300</b>
1-STATISTICS	40
2-TEACHING METHODS	20/80
3-CLINICAL PROSTHETICS & ORTHOTICS : ABOVE-KNEE	10/100
4-UPPER-LIMB PROSTHETICS & ORTHOTICS	30/50
5-TECHNICAL DRAWING	10/100
<b>QUARTER 8</b>	<b>10/400</b>
1-COMPONENT DESIGN & FABRICATION	10/50
2-CLINICAL AFFILIATION	/350
LECTURES ( 2 YEARS ):	760 HOURS
PRACTICAL ( 2 YEARS ):	1,680 HOURS
CLINICAL AFFILIATION ( 2 YEARS ):	700 HOURS
<b>TOTAL:</b>	<b>3,140 HOURS</b>

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