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DISABILITY

The present document on disability has been prepared in response to the request of the Directing Council of the Pan American Health Organization formulated at its XXXIV Meeting in September 1989.

The evolution of the concept of disability in the Region is reviewed, and the current situation is presented by subregions and by countries. The main problems are that policies are neither explicit nor integrated, nor are they based on real information. The social and economic consequences of disability are underestimated. The need for changes in the physical and social environment is not sufficiently recognized. In the developing countries the greatest prevalence of disability is in children and adolescents, where it is 10 times greater than in the developed countries.

The activities carried out by PAHO (1984-1990) are reviewed, and a service model at three different levels of care, based on epidemiological criteria and the use of appropriate technology, is presented.

The Secretariat proposes that PAHO technical cooperation with the countries in the area of rehabilitation continue to promote the programming of rehabilitation activities in the local health systems, with special emphasis on social participation and the intersectoral approach. Similarly, it is proposed to continue promoting epidemiological research in order to obtain reliable information that will make it possible to determine the distribution and characteristics of disability in the various population groups in the countries. Finally, efforts will be made to strengthen training programs and technological exchanges between the Member Countries. It is requested that the Executive Committee study the proposal with a view to making a recommendation on this subject to the XXIII Pan American Sanitary Conference.

CONTENTS

DISABILITY

1. FRAME OF REFERENCE

At the XXXIV Meeting of the Directing Council of the Pan American Health Organization in September 1989, the Minister of Health of Trinidad and Tobago requested the Director to include the topic of disability on the agenda for 1990 in order to clarify PAHO's concept of the comprehensive nature of the process and the Organization's role in the context of international technical cooperation.

The Program for World Action for the Decade 1983-1992, approved in 1982 by virtue of Resolution 37/52 of the United Nations, establishes the conceptual framework for the agencies of the System in Article 36 and defines the areas of responsibility of each in Article 176.

PAHO/WHO, as a member of the United Nations system, is participating in the implementation, evaluation, and follow-up of the United Nations Decade of Disabled Persons (1983-1992).

The Governing Bodies have produced several resolutions urging the Member Governments to assist in the integration of disabled persons so that they will have equal opportunity. Resolution WHA34.30 establishes the cooperation activities of WHO within the United Nations system in the area of disability prevention and rehabilitation (1983), and WHA38.18 (1985), WHA42.28 (1989), and CD30.27 (1984) emphasize the application of "community-based rehabilitation" (CBR) and the participation of disabled persons through the process of prevention, rehabilitation, and integration.

2. ANALYSIS OF THE SITUATION

The failure to assign priority to rehabilitation activities in the health programs in the Region has created a situation in which the quality of life of the disabled portion of the population constitutes a serious problem. Its causes include: a) the absence or limitation of rehabilitation services; b) the exclusion of rehabilitation in the national planning process; c) a negative and discriminatory attitude on the part of society; d) social segregation; e) lack of access to general services; f) increased mortality and morbidity in the group that is vulnerable to so many risks, and g) greater frequency of malnutrition and infections in disabled children.

In general consideration is not given to the fact that those in the population who are disabled require some type of intervention, and that for each disabled person there is a family that has greater needs.

Studies done in various countries show the prevalences of 14.0% in the United States of America and 12.8% in Canada as being the highest in

the Region. This is supposedly due to the fact that in these countries the socioeconomic situation and the coverage of services--predominantly social services--take into account impairments, disabilities, and handicaps. Other determining factors are the percentage of older population in these countries and the political force exerted by organized groups of disabled persons in demanding their rights. In the developing countries work-related disabilities often go undetected or are concealed as a result of laws and systems that do not take this possibility into account.

The differences found in a single country are interesting, given the marginality of the area in question. Thus, in Colombia the prevalence in Antioquia is 6.2%, while in the shantytown of Santander del Norte it is 10.0%. In Salvador, Bahia, in Brazil, the prevalence is 8.0% for the low-income neighborhoods, 2.5% in better neighborhoods, and 1.7% in Sao Paulo. In Argentina the prevalence in Buenos Aires is 4.9%, and in the rural areas of Jujuy it is 10.0%. In Peru it is estimated that 66.4% of the disabled population lives in marginal areas.

Another interesting aspect has to do with the age groups most affected in the various countries. In Canada, where there was an overall prevalence of 12.8%, in the population under 15 it was 5.7% (4.4% for 0-4 years and 6.7% for 10-14 years). In the United States of America, with an overall prevalence of 14.1%, in the 0-4 age group it was 2.2%, and in the 5-17 age group, 6.2%. In Jamaica, 9.7% of the child population had disabilities. According to a study of marginal populations done in Bahia, Brazil, 22.5% of the disabled population was in the 7-14 age group; on the other hand, in the population with more socioeconomic advantages the figure was 9.4%. Peru estimates that 68.0% of its disabled population is in the 0-14 age group. In Cuba it is estimated that the rate of disability in the population aged 65 and over is 10 times greater than in the 15-64 age group, and double that of the population under 14 years.

These data, in general, coincide with estimates and trends observed internationally:

- In the developing countries, the greatest prevalence of disability is among children and adolescents, and it is more than 10 times greater than in the developed countries.

- In all the countries the prevalence of disability and handicap increases in deprived and marginal areas.

- In the developed countries the greatest prevalence of disability is 65-and-older age group.

The provision of rehabilitation services is limited in most of the countries in the Region, and when such services do exist they are vertical in nature, extremely specialized, concentrated in the large cities, and dependent on the institution that provides them. They are usually provided on a piecemeal basis, directed by various institutions, and they also involve various sectors that usually respond to a variety of policies without any coordination with one another.

Institutional care is accessible only to groups that have the advantage of being geographically convenient, having a particular pathology, or belonging to a closed social security system. This lack of equity is accentuated all the more by the fact that some disabled people have access to complex technology imported from the developed countries whereas others do not have a single contact with rehabilitation throughout their lifetimes. Thus, for example, in Argentina, in 1985, out of 3,180 public hospitals only 133, or 4.1%, had some type of facility; Chile, with 181 hospitals, had 26 services, which means that 14.3% of the establishments were providing rehabilitation care; Colombia, with 910 hospitals, had 132 rehabilitation services, or 14.5%; Ecuador, with 380 hospitals and 26 rehabilitation services, had 6.8%; Mexico, with 806 hospitals and 91 services, had 11.2%; in Peru, of 353 establishments, only 45, or 12.7%, provided some type of rehabilitation care.

Another important factor is the lack of information and training of personnel, not only in the health sector but also in the other sectors involved. For example, of the 255 schools of medicine in Latin America and the Caribbean, only six include rehabilitation medicine in the undergraduate curricula.

A more detailed analysis of the situation is presented in Annex V.

3. REHABILITATION EPIDEMIOLOGY AND STATISTICS

Epidemiological studies carried out to analyze disease morbidity do not consider the consequences in terms of impairment, disability, and handicap (Annex I). The registries and the statistical information gathered in the Region of the Americas on mortality and morbidity do not usually make it possible to determine the prevalence of disabilities, the extent to which the demand for rehabilitation services is met, or the situation of the disabled in their social context (Annex II).

Many countries in the Region have conducted population censuses, household and sampling surveys, and registration campaigns, some of which have included elements relating to disability. Generally speaking, these efforts capture demographic data but little of the information required for determining the real situation in order to carry out programming and meet the needs of disabled persons.

Faced with this obscure panorama, WHO initiated investigations which indicated that 10.0% of the world population is disabled; within this percentage a breakdown was provided for each type of disability. However, these figures should be regarded only as broad reference points that have a certain value for the consideration of problems but limited or no value for the planning and development of national programs.

As a result of the fragmentation of the prevention-rehabilitation-integration process, the investigations that seek to gather data are carried out in an isolated manner by one or another of the sectors interested, and consequently the results are skewed. Moreover, the diagnosis of disability should be related to living conditions, including variables such as housing, employment, and economic income level.

Within the health programs the research has been oriented toward the clinical areas and has attached little importance to the epidemiological and social aspects of disability. Even so, information exists that remains within the sector or agency that generates it, and consequently the possibilities for exchange and enrichment of experiences at the local, national, and international levels is lost.

Taking this reality into account, PAHO has prepared a protocol for making a situational diagnosis of disability by means of household surveys. The purpose is to specify the components of a clear conceptual framework for collecting epidemiological information on disability and providing the countries of the Region with an instrument that will help to standardize information and ensure comparability of results, especially with regard to primary care programs and intermediate-level rehabilitation services.

Later it will be possible to establish a sampling model for the general population that will make it easier for the countries to collect epidemiological information on disability and to make national projections as a basis for formulating policies and applying them to the provision of services.

This research is being carried out in Argentina, Colombia, Costa Rica, Honduras, Barbados, and Saint Lucia. It is estimated that the results will be available at the end of 1990.

4. REGIONAL PROGRAM OF PAHO

4.1 Activities Carried Out During 1984-1990

PAHO, in an effort to contribute to conceptual clarification and also to the achievement of integration and comprehensiveness, has presented a functional scheme which is based on an organized social nucleus characterized by the coexistence of basic structures (policies, legal, cultural), and services (educational, medical, sports, religious) in order to provide for basic human rights (health, housing, employment, and education).

Rehabilitation activities should be included in this system on an integrated basis. From the administrative standpoint, this integration seeks to achieve coordination and the proper use of resources; from the social standpoint, it aims at achieving equity and providing equal opportunities.

The characteristics of technical cooperation (which encompasses activities with a broader range of action, including social, and economic, and educational aspects) have made it possible to carry out activities with the participation of individuals and communities and to coordinate them with other sectors (see Annex III).

In 1984 only seven countries had cooperative projects with PAHO: Argentina, Belize, Chile, Colombia, Mexico, Saint Lucia, and Venezuela.

In 1990 there are 19 countries that have requested and are receiving technical cooperation: Argentina, Bahamas, Bolivia, Chile, Costa Rica, Colombia, Cuba, the Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Peru, Saint Lucia, Uruguay, and Venezuela. But perhaps even more important than the increase in the number of countries with rehabilitation activities as part of their cooperation programs with PAHO are the kinds of activities they are carrying out.

Generally speaking, in the past the countries made rehabilitation programs dependent on external financing, and most countries used them to train very specialized personnel and organize institutes with limited operational capacity. For all practical purposes the programs have focused on physical disabilities. At the present time, however, resources are being channeled to the countries on a priority basis in order to facilitate the adoption of self-care systems which will be easily integrated into general programs that cover all disabilities and that involve disabled persons themselves and the members of their communities in the planning and execution.

4.2 Community-Based Rehabilitation Programs

Community-based rehabilitation (CBR) makes coordination possible within the health sector (with services for maternal and child care, communicable diseases, nutrition, etc.) and with other sectors (such as the education, social, informal, and labor sectors and organized groups of parents and disabled persons); facilitates the incorporation of rehabilitation into general planning; takes advantage of existing budgets; and contributes to improving of the quality of life of the entire community.

In 1984, community-based rehabilitation activities were being carried out in only two countries, Argentina and Saint Lucia. The experiences in these countries, together with those of others which for various reasons were not linked to PAHO or were not active, were exchanged in a Workshop on Prevention, Rehabilitation, and Integration held in June 1985 at PAHO Headquarters with the participation of representatives from Argentina, Colombia, Chile, Ecuador, Haiti, Jamaica, Mexico, Nicaragua, Peru, Saint Lucia, Uruguay, and Venezuela. Also participating in the event were Helen Keller International, Partners of the Americas, Rehabilitation International, and the World Rehabilitation Fund. This workshop gave impetus, above all, to the preparation of material to facilitate training.

Subregional workshops were also held in 1987 in the Southern Cone, the Andean Area, Central America, Mexico, and the Spanish-speaking Caribbean. In 1988 a workshop was scheduled to be held in the Caribbean but had to be postponed because of Hurricane Gilbert and has not yet been reconvened (Tables 1 and 2).

In the execution of these activities collaboration was provided by UNICEF, Helen Keller International, Rehabilitation International, and the World Rehabilitation Fund at the international level, and by governments, entities, and organizations at the national level.

Table 1

EXPERIMENTS IN PROGRESS

COUNTRY	SECTOR	AREA	COVERAGE (population)	SUPERVISION	STARTING DATE
Argentina	Health PAHO	Rural	70,000	MD OT Therapist	1982
Brazil	Health	Urban	150,000	MD Psychologists	1986
Colombia	Health NGO	Urban Rural	20,000	Volunteer Therapist	1986
Costa Rica	Education Health UNICEF	Rural	2,200	Teachers Nurses	1987
Chile	Health	Rural	8,800	MD Nurses	1987
Cuba	Health Education	Urban	12,000	MD Physical Therapist Therapist	1987
Honduras	Private	Urban Rural	--	MD Social Assistant Physical Therapist	1988
Peru	Education Health	Rural	2,500	Teachers MD	1986
Saint Lucia	Health	Rural	3,500	Physical Therapist Nurses	1981
Uruguay	Health WHO	Rural	5,440	MD Social Assistant	1987

Table 2

TRAINED PERSONNEL (PAHO WORKSHOPS)
CBR 1987-1989

Lawyers	10
Administrators	23
Anthropologists/Sociologists	7
Nurses	27
Engineers/Architects	3
Teachers	80
Physicians	137
Vocational Guides	12
Health/Community Promoters	16
Disabled Persons	22
Psychologists	43
Physical Therapists	107
Occupational Therapists	17
Social Workers	64
TOTAL	568

4.3 Strengthening of the Services

PAHO has proposed a three-tier rehabilitation care system that responds to the philosophy of local health services programming. The first is aimed at providing rehabilitation care, including the prevention and early detection of disability at the primary health care level by using existing, unspecialized human resources and appropriate technology in order to attain 100% coverage through community-based rehabilitation.

The overall objective at the second level is to provide rehabilitation care at the second level of health care through specialized human resources, employing epidemiological criteria and bases, and using technology appropriate for the level.

The third level will provide rehabilitation care at the third level of health care through human and material resources in the institutions that are structured according to increasing degrees of complexity in order to meet the demands of the various levels that require advanced technology.

At the same time, PAHO is preparing an instrument that will make it possible to analyze the impact that the actions of the services have on individuals and the population, as well as the operational capacity of the services and of CBR in terms of efficacy, efficiency, and effectiveness.

5. THE ROLE OF NONGOVERNMENTAL ORGANIZATIONS IN REHABILITATION PROGRAMS IN LATIN AMERICA AND THE CARIBBEAN

Traditionally, the rehabilitation services were regarded as acts of charity and kindness, in accordance with the sociological characteristics of the times. Charitable organizations were responsible for the implementation of plans and programs. The blind were the first to benefit in most of the countries. Subsequently, as a result of epidemics of poliomyelitis, volunteer groups were organized which led, almost without exception, to the appearance of rehabilitation services in the Region and to the nongovernmental organizations that currently exist.

Of the international nongovernmental organizations that have provided the most collaboration in the Region, mention should be made of those whose principal objective is the prevention of blindness, Helen Keller International (HKI) and the International Eye Foundation (IEF).

Since 1957 the World Rehabilitation Fund (WRF) has been participating in and assisting programs for the rehabilitation of persons with physical impairments. The strong support provided by this Fund made it possible to train a large number of physicians specialized in rehabilitation medicine, as well as other team professionals.

Partners of the Americas has focused its cooperation on the area of special education. Rehabilitation International has been disseminating pertinent information for decades. Disabled People International (DPI),

since its establishment in 1981, has included representatives from the Region on its governing board. The work carried out by DPI has been very valuable, since it brought together disabled persons who are working to improve the programs and who are assuming a role different from that which traditionally had been assigned them.

6. TRENDS IN REHABILITATION SERVICE NEEDS IN THE REGION

In the years remaining in the current century, and certainly at the beginning of the next one, the need for rehabilitation services will increase as a result of the rise in demand, changes in the etiology, longer survival, consciousness-raising, and new modalities of service.

6.1 Demand

Between 1970 and the year 2000 the total population in the Region of the Americas will have doubled from 280 million to more than 550 million, and by the year 2000 the urban population will account for 64.0% (440 million) of the total population compared with 49.0% (160 million) in 1970.

The United Nations Population Division estimates that the proportion of population 60 years of age and older will increase from 6.4% in 1980 to 7.2% by 2000, and 10.8% by 2025. Life expectancy at birth will increase from its level of 51.2 years during the period 1950-1955 to 71.8 years in the period 2000-2025. There is no doubt that the elderly population, especially the very elderly, as a group has a high prevalence of disability.

Prevention measures and immunization will cause some of the disabling etiologies in the Region to disappear or diminish considerably. This will be the case for poliomyelitis, measles, onchocerciasis, otitis media, and hypothyroidism (Annex III).

Genetic counseling and the monitoring of pregnancy will help reduce some genetic disabilities. On the other hand, accident-produced disabilities will tend to increase in all age groups, as will those related to chronic and degenerative diseases. The damages resulting from lack of control of the environment and the use of chemical products such as pesticides lead to disabilities that could be prevented. There is little knowledge about the epidemiological aspects of the sequelae of these poisonings, which involve several sectors. This is the case with the results from some of the research projects being carried out in different countries in the Region. In a study on pesticide poisoning conducted in Costa Rica in 1988, it was found that 3.0% of the victims had sequelae. Of these, 38.2% were neurological, 12.5% psychiatric, and 10.0% respiratory, with a high risk of disability. In a study performed in Argentina (1983-1984), among all those with manifestations of chronic poisoning (20.0-17.0%), it was found that 65.0% had involvement of the central nervous and peripheral systems.

6.2 Increased Survival

A large number of situations that previously led to fatal results are now being survived; however, they frequently present a high risk of disability. Technological progress applied to medical care is one of the determining factors in this situation. Thus, for example, in a study carried out in San Diego, California, on craneoencephalic trauma, it was confirmed that in 1976, 21.3 out of 100,000 cases were fatal. Six years later (1982) this figure had declined to 17.5 per 100,000. Survival of those with low birthweight (501-1500 g) in New York City showed a proportional increase of 86.0% between 1962 and 1981. In the Grady Memorial Hospital in Atlanta, Georgia, the death rate of newborns weighing 1001-2000 g declined from 13.8% in 1968 to 4.0% in 1982. According to various investigators, the incidence of disability in these children ranges between 10.0%-15.0% and 40.0%-50.0%.

6.3 Consciousness-Raising

Better knowledge about disability, its causes, and care measures will lead to preventive actions on the part of the public and professionals in general. Early diagnosis, together with early treatment and intervention, will reduce complications, iatrogenesis, and institutionalization. At the same time, disabled persons themselves will reduce their dependency by achieving greater social integration.

6.4 Services

The decentralization and rationalization of services that is currently being implemented, combined with involvement of the community in identifying its problems and planning, will ensure that changes are effected and priority is given to first-level and community-based rehabilitation (Annex IV).

7. RECOMMENDATIONS

The critical situation posed by disability in the Region requires action at all the decision-making levels as a means of ensuring the development of effective programs.

7.1 At the Country Level

7.1.1 National policy on the disabled. This should be explicit, integrated, and comprehensive, and at the same time it should be based on equal opportunity and full participation. The fundamental objective should be the achievement of well-being within the socioeconomic context and the reduction of socioeconomic effects of disability on the individual. Integration presupposes the need for dynamic coordination among the sectors involved in the planning and evaluation of activities. Comprehensive coverage should take into account not only those who receive the service but the process itself as well: prevention, rehabilitation, and integration.

7.1.2 Reorientation of the programs. This requires that rehabilitation activities be included within general programming, especially programming for local systems. Coordination with other sectors and participation of the disabled and their communities will ensure integration and comprehensiveness in the process.

7.1.3 Evaluation and epidemiological analysis. Epidemiological studies are required that will lead to better knowledge of the problem, particularly in terms of its socioeconomic and demographic aspects. Carrying out interventions that have been programmed in this way will make it possible to optimize resources and detect or eliminate risk factors.

7.1.4 Strengthening of the services. In the developing countries--where public health characteristics run the gamut of malnutrition, precarious hygiene, violence, promiscuity, and chronic diseases to environmental exposure--new care models should be sought that include rehabilitation. Community-based rehabilitation (CBR) has been shown to be a valuable technology when it is articulated within a system with various degrees of complexity.

7.1.5 Training. Not only the health teams but also those on teams in other participating sectors should be knowledgable about disability. The scarcity of informed and trained personnel is one of the factors that should be dealt with without delay.

7.1.6 Collection and exchange of information. The collection, presentation, registration, and exchange of information should be initiated, and parameters should be included that take into account the living conditions and the integration of disabled persons.

7.1.7 Research. Research should be carried out to improve knowledge about the risk factors for disability, prevention measures, and technologies that are adapteble to different situations, particularly in the local services.

7.2 At the Level of PAHO

Rehabilitation is a component of the Health of Adults Program in the PAHO Secretariat. Its general objective is to promote the inclusion of preventive actions and actions for the rehabilitation and integration of disabled persons through national programming, using appropriate technologies incorporated into the national health and welfare systems in order to achieve equity for disabled persons. Other general objectives of the regional program aim to:

a) Promote the integration of rehabilitation activities into the general health services.

b) Promote CBR as a component of primary health care and other local services.

c) Promote the training of appropriate personnel for all the levels.

d) To promote general knowledge about the problems related to disability.

7.2.1 Specific Objectives

a) National rehabilitation policies: To collaborate with the governments in the definition of policies, intersectoral programs, and rehabilitation strategies based on an analysis of the situation and the availability of national resources; to establish bases for the coordinated planning of health, education, labor, and social well-being in the national agencies; to provide the conditions so that the governments of the Region of the Americas as well as the national community will cooperate in health and economic and social development, and to ensure adequate information for evaluating progress in the primary health care strategy (PHC); and to improve policies and programs for the twenty-first century.

b) Integration of services: To promote the integration of disability prevention and rehabilitation into local health systems within the framework of primary care; to study the effectiveness of rehabilitation services; to define the coverage of rehabilitation services in municipalities, provinces, and countries; to specify the methodology and administration of the services according to disability-related levels.

7.2.2 Goals

a) To promote and support actions so that by 1995 at least 60% of the countries in the Region will have incorporated rehabilitation actions into their general health services.

b) To promote and support actions so that by 1995 at least 80% of the countries will be applying CBR.

c) To promote and support actions so that by 1995 at least 50% of the countries in the Region will have training programs in disability prevention and rehabilitation for the various pathologies and levels of care.

d) To promote research and the exchange of information at the national and regional levels on the situation of disabled persons, technologies, and administration of services in at least 30% of the countries in the Region.

7.3 Indicators for Surveillance and Evaluation

The lack of data and coordination with other sectors makes it difficult to establish indicators. A few simple ones are proposed:

- Number of countries that have formulated national rehabilitation policies and carried out programs.

- Number of countries that include rehabilitation within the structure of their health sector.

- Number of countries that apply community-based rehabilitation within the framework of PHC.

- Number of countries that have national organizations of disabled persons that collaborate with the programs.

- Number of countries with rehabilitation integrated into their social security systems.

- Number of general hospitals with rehabilitation services.

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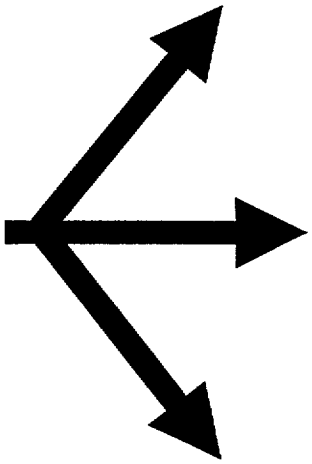
IMPAIRMENTS - DISABILITIES - HANDICAPS

	CHARACTERISTICS	ORGANIC
IMPAIRMENT In the context of health experience, an impairment is any loss or abnormality of psychological, physiological, or anatomical structure or function.	Impairment is characterized by losses or abnormalities that may be temporary or permanent, and that include the existence or occurrence of an anomaly, defect, or loss in a limb, organ, tissue, or other structure of the body, including the systems of mental function.	Impairment represents exteriorization of a pathological state, and in principle it reflects disturbances at the level of the organ.
		FUNCTIONAL
DISABILITY In the context of health experience, a disability is any restriction or lack (resulting from an impairment) of ability to perform an activity in the manner or within the range considered normal for a human being.	Disability is characterized by excesses or deficiencies of customarily expected activity performance and behavior, and these may be temporary or permanent, reversible or irreversible, and progressive or regressive. Disabilities may arise as a direct consequence of impairment or as a response by the individual, particularly psychological, to a physical, sensory, or other impairment.	Disability represents objectification of an impairment, and as such it reflects disturbances at the level of the person.
HANDICAP In the context of health experience, a handicap is a disadvantage for a given individual, resulting from an impairment or a disability, that limits or prevents the fulfillment of a role that is normal (depending on age, sex, and social and cultural factors for that individual).	Handicap is concerned with the value attached to an individual's situation or experience when it departs from the norm. It is characterized by a discordance between the individual's performance or status and the expectations of the individual himself or of the particular group of which he is a member.	SOCIAL Handicap thus represents socialization of an impairment or disability, and as such it reflects the consequences for the individual--economic and environmental--that stem from the presence of impairment and disability.

Source: International Classification of Impairments, Disabilities, and Handicaps, WHO, 1980

IMPAIRMENT
DISABILITY
HANDICAP



PREVENTION

Primary Care
Maternity and Childhood
Nutrition
Immunization
Early Detection
Accidents
Hygiene
Training of Human Resources
Health Education

REHABILITATION

General Health Services
Education
Professional Training
Technical Assistance
Social Services

INTEGRATION

Legislation
Barriers
Social Security
Education
Professional Training
Employment
Recreation and Sports
Culture
Religion
Information and Public Education

MEASURES FOR DISABILITY PREVENTION, BY CAUSE

Cause	Primary	Secondary	Tertiary*
Congenital defects	Genetic counseling; health education; responsible parenthood; reduction of intermarriage	Early comprehensive treatment; psychological and social counseling	Rehabilitation treatment Health education
Communicable diseases	Vaccination; drinking water supply and sanitation; health education; epidemiological control	Early appropriate treatment; administration of specific drugs; reduction of risk of exposure	Education for self-care Provision of technical assistance
Noncommunicable diseases	Hygiene and dietary habits; physical and sports activities; regular physical checkup; health education	Control of risks; comprehensive treatment; educational and vocational guidance; changes in individual, family, and community attitudes	Vocational guidance Ordinary and special education
Accidents	Specific legislation; community education; inspection of vehicles and machinery; safety systems	Reduction of risk of exposure; early treatment	Elimination of structural and architectural barriers
Malnutrition	Improvement of nutrition of pregnant women, children, and elderly; vitamin and mineral supplements; improvement of planning, production, and distribution	Monitoring of growth and development; adequate and balanced diet	Public information. Rehabilitation of housing and urban infrastructure. Access to employment.

*The tertiary measures indicated are valid for all causes of disability.

REHABILITATION SERVICES

LEVEL OF SERVICE	SECTOR INVOLVED	PROBLEMS	ACTIVITIES
	HEALTH	Lack of identification of disabilities as a consequence of accident or illness. Lack of interventions in general services. Lack of specific resources.	General health services. CBR. Technical assistance: othotics and prostheses. Psychological support. Self-care.
LOCAL	SOCIAL	Prejudice and marginalization. Lack of access to work, sports, recreation, etc. Architectural barriers to communication and transportation.	Facilitate provision of services. Elimination of barriers. Labor identification and adaptation. Social, sports, religious, labor, educational integration, etc. Promote groups of disabled parents and/or individuals.
	EDUCATION	Little information, knowledge, and technology at all levels (public, authorities, family, disabled persons, professionals, public in general) Lack of access to schooling	Integration of children with special needs in common classrooms. Special schools. Education of disabled adults. Education and information on disability.
REGIONAL		Lack of real data for planning purposes. Few specialized resources, concentrated in large cities.	Special rehabilitation services in the health sector and education at all levels. Information and employment services. Epidemiological surveillance.
NATIONAL		Lack of prevention and rehabilitation measures in policies, plans, and programs. Paternalistic criteria versus equal opportunities. Lack of standards, procedures, and human resources to meet the challenges of national realities.	Integrate planning and programming from political decision onward. Social Security. Research. Information center for disabled persons.

SITUATION BY COUNTRY

Mexico

Mexico has quality resources for the care of disabilities of all types of etiology. However, because of their number and geographic distribution, a high percentage of the disabled population lacks coverage. In 1988, in an expanded sample, the prevalence of activity limitation was 1.9%. Thirty-one per cent of all the cases presented permanent limitations. The three leading causes were damages associated with acquired disease, congenital damage, and sequelae of accidents.

Only 6.8% of Mexico's hospitals have rehabilitation services, and human communication services are limited. Training courses are offered at different levels, which makes it possible to train all professionals, not only Mexicans but those from other Latin American countries as well, especially the Central American and Latin Caribbean countries.

Data from 1984 provided the following figures with regard to resources available: physicians specialized in rehabilitation medication, 222; physicians specialized in human communication, 44; physical therapists, 575; occupational therapists, 106; speech therapists, 128; rehabilitation nurses, 23; psychologists, 28; and social workers, 79. The education sector had 391 special education schools, 51 job training centers, 196 psychopedagogical centers, and 469 integrated groups.

CENTRAL AMERICA

The countries in this subregion--Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama--have different degrees of development in rehabilitation.

This subregion, which in recent years has been suffering from the effects of armed conflict, is in a critical situation in the area of rehabilitation.

Despite this pressing situation, aggravated by the other disability risks with which it is associated (nutritional, perinatal, accidents, congenital and chronic diseases), the governments failed to identify rehabilitation as one of the components of the Central American Initiative.

Costa Rica

In a publication of Costa Rica's National Council on Rehabilitation and Special Education, it is estimated that the population with disabilities and handicaps increases each year by approximately 5,000 cases. Some 46.3% of the registered handicapped population is under 30 years of age, with the greatest percentage concentrated in the 10-20 years age bracket.

The proportion of handicapped population that has received or is receiving special education services is 19.3%, and those most benefited are the mentally retarded (61.4%); 7.7% of the handicapped population are wage-earners, 38.2% depend on the income of the family group, and 14.5% receive pensions under the social security system; for the rest no source has been specified.

Costa Rica is well equipped and set up to carry out rehabilitation. A decree has been prepared by the Office of the President of the Republic and the Ministries of Health, Public Education, Labor, and Social Security, and National Planning and Economic Policy (12 July 1989) entitled "National Policies for the Prevention of Impairment and Disability and for Comprehensive Rehabilitation," the first of its kind in the Region. The country has experience in rehabilitation through the coordination of health and special education.

In February 1987 the Costa Rican Social Security Fund had a total of 13,600 disabled persons receiving pensions under its coverage scheme for disability, old age, and death. Approximately 500 requests are received each month, and some 4,500 are being processed, of which approximately 50.0% are approved. However, there is no plan for rehabilitating these pensioners.

In 1989 Costa Rica had 20 specialized physicians, 99 physical therapists, 17 occupational therapists, seven physicians specialized in communication and speech, 80 speech therapists, and 150 teachers of the deaf.

Groups of disabled persons and of parents of disabled children have been organized.

El Salvador

In 1984 the Ministry of Education undertook a review of the comprehensive care being given to disabled children. Various factors were studied and the conclusion was reached that the percentage of coverage was 1.0%. The human resources available at that time were 39 physicians, 146 technicians, and 136 teachers. There were six special schools and 17 integrated classrooms, five rehabilitation centers and three services in health sector hospitals, and 11 private services. A major problem in El Salvador is the lack of intersectoral coordination and coordination between the agencies and donor governments.

Guatemala

Guatemala is one of the countries that initiated activities in the 1950s by developing programs for the motor and sensory disabled. Early on, rehabilitation was included as part of social security. There are training courses for medical specialists and physical therapists. However, nonintegrated, vertical programs still exist, and there is limited coordination between the health sector and those responsible for social integration.

In 1986, 10 centers for physical rehabilitation were functioning: one sensory, four for rehabilitation and special education, three for rehabilitation of mental impairments, one for the rehabilitation of alcoholics, three for social rehabilitation, and three for professional rehabilitation.

There were 23 physicians specialized in rehabilitation medicine, 10 residents, 112 physical therapists, 21 occupational therapists, and eight speech therapists working in rehabilitation institutions. All these resources were concentrated in the capital, with limited coverage in other localities.

Honduras

In 1989 a law on the integration of disabled persons was approved, which is beginning to be enforced. According to data from the Honduran Institute of habilitation and Rehabilitation of the Handicapped, there is no exact knowledge of the number of persons who require rehabilitation services. According to projections of international and national information, it is estimated that of the total population of 4,513,940 Hondurans, 500,000 suffer some kind of disability, of whom only 4,000 receive rehabilitation services, or 0.8% of the population. This information indicates that coverage is extremely deficient.

The Special Education Centers currently take care of a small percentage of the children and adolescents who require this kind of care.

At the present time the Ministry of Public Education has 126 classrooms in 99 schools in the country's 18 departments that cover approximately 2,520 children with specific learning problems. This figure represents 0.3% of all children enrolled.

With the assistance of nongovernmental organizations (NGOs), a high-level workshop for ortheses and prostheses has been set up and two rehabilitation centers have been built, one in Tegucigalpa and the other in San Pedro Sula. As of 1990 the professional resources in Honduras are: five medical specialists, and five being trained, 19 re-educators, two physical therapists, and four occupational therapists.

Nicaragua

As a consequence of the armed conflict, it is estimated that there are 2,790 persons disabled among the combatants and 1,544 injured in the population under 15 years of age. In addition, according to unofficial and unconfirmed estimates there are probably another 2,000 disabled persons in the displaced or refugee population in neighboring countries.

In a short time Nicaragua has made effective use of international aid, thanks to which it is now able to meet the demands for equipping the entire population of disabled combatants and extend its programs to the civilian population, giving priority to children. The country has initiated a project with the cooperation of the Government of Finland and

PAHO that will make it possible to train personnel and equip the services. In coordination with another project, Spain/ILO, work is being done in the area of labor force integration. Community-based rehabilitation is well known in the different sectors, although it is not yet sufficiently developed.

Associations of disabled persons and parents of disabled children have been organized. There are six associations of disabled persons (combatants, blind, deaf) and one of parents of disabled children.

Panama

Panama has not yet incorporated rehabilitation activities into the health sector, except for a unit in the social security system. Emphasis has been placed on special education. It is the least equipped country in Central America, except for Belize, where some facilities exist for children and the blind, all provided by NGOs.

Central America has facilities for training almost all the personnel required. There is need for a school of occupational therapy, and although courses are offered in Guatemala, Costa Rica, and El Salvador, they do not meet the demand for trained therapists across the full range of activities included under occupational therapy.

ENGLISH-SPEAKING CARIBBEAN

The most notable characteristics of the Caribbean in the area of rehabilitation are the activities carried out by NGOs and organized groups of disabled persons, particularly the blind.

For political and cultural reasons, the medical rehabilitation model, as it exists in the rest of the countries in the Region, has not been developed in the English-speaking Caribbean.

The subregion does not have professional resources or training programs. There is a physical therapy school in Jamaica at the University of the West Indies.

The emphasis of activities is on the child population, but the risk of disability in the adult population is very high owing to the prevalence of chronic diseases and the high rate of accidents.

Except in Saint Lucia, the experiences in rehabilitation have not been articulated with the health sector.

Rehabilitation resources in the English-speaking Caribbean almost without exception involve physiotherapy services, special education, and early stimulation. There are NGOs, such as the Caribbean Association of Rehabilitation Therapists (CARI), the Caribbean Association for Mental Retardation and other Developmental Disabilities, the Caribbean Council for Blindness, and the Caribbean Association for Rehabilitation of the Disabled (CAREHAB).

Between 1975 and 1982 (except for 1977) the Conference of Caribbean Ministers of Health has recommended that the health sector assume its role in the rehabilitation process. However, the changes that have been generated in national care programs have been limited.

Jamaica

The work that has been carried out as one of the components of the International Study of Disabilities in Children shows that the prevalence for all the combined categories and degrees of disability was 9.7%. The most common disabilities were cognitive, with a percentage of 8.2% for all degrees and 1.9% for moderate and severe. The least frequent was convulsions, with 0.2%.

Saint Lucia

A study carried out in 1985 on consultations at the health centers, using the survey contained in the manual on community-based rehabilitation (CBR), revealed a low prevalence of disabilities (0.7%). This is possibly due to the fact that disabled persons in institutions were not included, nor were those with mild disabilities.

The most frequent disabilities involved motor, mental, and learning problems. The largest number of disabled were in the over-15 age group. Saint Lucia is the only country in the Caribbean with experience in CBR, which has been implemented since 1981 and covers 95.0% of the population. This strategy is integrated into the overall programming carried out by the Ministry of Health.

THE LATIN CARIBBEAN

This subregion includes Cuba, Haiti, and the Dominican Republic.

Cuba

Preliminary research has revealed a predominance of disability in adults (19.0%) and, among them, those 65 years of age and older (37.0%). Adults with severe physical disabilities accounted for 51.6% of the total prevalence identified in the population over 15 years of age and predominated in the group 56 years and older.

In terms of age groups, prevalence in the group aged 65 and over is 10 times greater than in the 15-64 year group, and this latter is approximately double the rate for the group under 15.

Cuba has gone through a major change in its rehabilitation programs. While as long as two decades ago this country had high-level services and training courses, in recent years it has given rehabilitation medicine a hierarchical structure and separated it from orthopedics.

Rehabilitation has been included in decentralized planning and articulated with the family medicine program. A very effective technical-administrative model has been developed for countries that have attained a certain degree of development.

In this way Cuba covers 90.0% of its disabled population. Since 1984, efforts have been made to organize "old-timers circles," which bring together people aged 60 and over. By 1989, 3,000 such circles were established. Their members included persons with disabilities deriving from chronic diseases.

The Cuban Association of Motor-Disabled Persons has been in operation since 1980 and now has some 26,000 members. Its principal objective is integration. It has 80 sheltered workshops that employ disabled persons.

Dominican Republic

In 1985 a study on disability was conducted in a peripheral area of Santo Domingo (Gualey district). Only physical and sensory disabilities were considered, and a prevalence of 5.5% was found. The group most affected was the population 35 years of age and under, and within that, the 0-19 year group. Some 68.0% of the cases corresponded to physical disabilities, and of these, 52.0% were the result of the sequelae from poliomyelitis.

The country has resources for training almost all the professionals required. There are no schools of occupational therapy at present, but they are being organized.

With the cooperation of the World Rehabilitation Fund, a university-level school of orthesis and prosthesis is operating at which professionals for the entire Region are being trained.

Rehabilitation activities in the Dominican Republic are carried out by a private nonprofit organization that has 11 affiliates which provide rehabilitation services throughout the country, mainly to persons with physical disabilities and to the mentally retarded.

Haiti

Despite the efforts being made in Haiti and the international cooperation that has been provided, this country does not have sufficient resources to take care of its disabled population.

ANDEAN AREA

The countries of the Andean Area--Bolivia, Colombia, Ecuador, Peru, and Venezuela--have achieved varying degrees of progress in rehabilitation. Some of them, such as Colombia and Venezuela, have been pioneers in the subregion, while others--for example, Bolivia and Ecuador--are still in the stage of political and administrative formulation.

Bolivia

Bolivia has 24 services for the rehabilitation of neuromuscular disabilities, seven for blindness, 15 for mental retardation, and 13 for deafness. There are 10 associations of/for disabled persons located in the large cities, with several in La Paz.

There are 21 physicians, 48 physical therapists, three occupational therapists, 10 workers, and one orthesis/prosthesis technician.

Colombia

A survey on the prevalence of disability carried out in Antioquia in 1982 showed an overall prevalence of 6.2%, with variations between the municipalities ranging between 11.9 and 2.7%.

The age group most affected was the population 40 years and over. The most frequent disability was alcoholism (20.0%), followed by musculoskeletal conditions (13.7%), cardiac disease (10.5%), mental retardation (9.1%), hearing loss (8.4%), epilepsy (6,7%), speech impairments (6.0%), mental disorders (3.5%), and blindness (2.3%).

The study showed that 65.5% did not receive medical care and 51.0% of the disabled were from the low-income socioeconomic strata.

A probability sample in Cali (1982-1983) revealed a prevalence of disabilities of 48 per 1,000 in all ages. The rate increases with age.

In 1989 a survey was carried out in Santander del Norte in two municipalities with a view to introducing CBR. The two areas selected had health centers or posts, and the data collection was done by health guardians and schoolteachers trained on the basis of the PAHO/WHO Manual. One of the areas had a high index of marginality, and that was where 29.0% of the cases were detected. The prevalence of disability found was 10.0%.

A 1987 study, also done in Antioquia, examined the status of rehabilitation and its relationship to violent causes. It showed that the second cause for rehabilitation consultations is sequelae from violence (28.0%), the first being degenerative damages (36.0%).

Colombia is one of the countries which from the beginning of its rehabilitation activities integrated them into the general hospitals. Even so, only 14.5% of its hospitals have rehabilitation services.

There are 35 institutions specializing in hearing problems and 24 in blindness. All the professionals of the rehabilitation team can be trained in the country in university-level courses.

In the last four years Colombia, recognizing the need to extend its coverage further, has begun to work with the CBR approach and is coordinating with other sectors, including the disabled themselves. By

the end of 1989 there were seven projects under way, one of them being the Riohacha project, carried out by the members of an indigenous community in close collaboration with the health sector.

Colombia has a long history in the area of labor force integration.

Ecuador

On the basis of data compiled in the country by the INFA (1981), a disability prevalence of 12.8% was revealed. The distribution by type of disability was as follows: 32.0%, physical; 35.0%, sensory; 26.0%, mental; and the remainder, various. Only 6.8% of Ecuador's hospitals have rehabilitation services or facilities. Fifty per cent of the disabled population corresponds to the population from 0-14 years of age.

The country has 118 services which come under: Health, Welfare, Social Security, INFA, Education, and Labor. Of these 118 establishments, 35 are private.

In 1990 there were 64 medical physiatrists, three medical phoniatricians, 923 physical therapists, 174 occupational therapists, and 282 speech therapists.

Peru

Although figures on the prevalence of disabilities are not available, it is known that the greatest percentage of disabled persons (68.0%) is in the 0-14 age group.

The majority of the disabled live in urban fringe areas (66.4%); 32.0% of the disabilities detected are of the locomotive apparatus; 26.0%, mental retardation; and 21%, communication disorders.

In Peru there are programs for all types of disability, and the country trains all the personnel required. There are 100 services operating in the health and social security sectors and 86 in the education sector.

In 1989 Peru had 152 medical specialists, 828 physical therapists, 69 occupational therapists, and 830 speech therapists. Rehabilitation facilities are found in 12.7% of Peru's hospital establishments.

Also in 1989 the Law on Health, Education, Labor, and Social Promotion was regulated and the National Council for the Integration of the Handicapped was established by Executive Order. At the same time, community-based rehabilitation was approved as one of the strategies of decentralization and multisectoral coordination.

Venezuela

Venezuela has good experience in the specific field of prevention and basic treatment of disability in leprosy patients, which was initiated in 1965 and at the present time reaches 65.0% of the patients under control. In the area of general rehabilitation, there has been experience in all stages of the process.

Various sample surveys have been conducted since 1963 for diagnosing the disability problem and assessing its extent, both in urban and rural areas.

The last project, carried out in 1982 in an urban area in Tocuyo, yielded an incidence of 5.2%, with the disabilities distributed as follows: locomotor (37.3%), sensory (20.6%), mental (19.5%), and multiple (23.0%).

The distribution of disability according to age groups showed 55.6% in the 0-14 year group and 44.5% in the group over 15 years of age. In 1985 the Office of Special Education had 1.7% of the population between the ages of 1 and 14 with different learning disabilities enrolled in its programs.

At present (1990) Venezuela has 185 medical physiatrists and 19 phoniatricians, 561 physical therapists, 306 occupational therapists, 230 speech therapists, 16 orthesis and prosthesis technicians, 30 middle-level technicians, and 14 teachers of shoemaking. Five factories in the country produce wheelchairs.

SOUTHERN CONE

The countries that make up the Southern Cone are Argentina, Brazil, Chile, Paraguay, and Uruguay.

Argentina

Argentina has a long history in the area of rehabilitation. From the beginning of the century volunteer groups and NGOs were organized specifically to provide care for the mentally deficient, the blind, and those suffering from heart disease. In 1943 the rehabilitation of physical disabilities was initiated. The country has specific governmental programs at the national, provincial, and municipal levels in the areas of health, social action, education, labor, and social security.

In 1981 a household survey revealed a disability prevalence of 4.9%, with 32.2% neuromotor; visceral, 29.2%; mental, 21.7%; and sensory, 16.8%. The sample was taken in an urban area and did not include institutionalized persons. In a study of the social security system conducted during the first four months of 1985, it was found that for every 100 new subscribers admitted to the system, 33 joined in order to receive disability benefits. The rate of benefits per 10,000 population ranged between 6.2 and 7.5%.

A study carried out in 1986 in a mine in the Province of Jujuy revealed that 35.5% of the total worker population had disabilities, of which 14.5% had partial and permanent disabilities; 12.0%, partial and transitory disabilities; and 9.1%, total and permanent disabilities.

In the same province in 1981 the rural population was classified according to criteria for vulnerable family groups, and it was found that

10.0% of the population suffered some disability. The socioeconomic situation in the area, characterized by insufficient caloric intake, low family income, and subsistence economy, adds to the problem when a family member becomes disabled.

In Argentina there is a comprehensive law covering the disabled. In terms of its application, it was found in 1987 that 63.4% of the persons recognized as disabled were between 15 and 59 years of age; 31.9% were in the 0-14 age group; and 4.3% were 60 years old or over. Of this disabled population 7.7% were professional, technical, and similar workers; 5.6% were merchants and salesmen; 4% were workers in the service sector; 6.5% were automotive workers and drivers; and 39.5% were in sheltered workshops. All were covered by social welfare benefits; 62.7% had applied for such benefits from social welfare organizations and only 1.5% were employed.

Of the total of those recognized as being disabled, 10.5% had received rehabilitation treatment and 93.2% presented permanent disability.

Nongovernmental organizations are highly developed in Argentina, and those constituted by the disabled themselves are growing rapidly.

Total coverage has not been achieved in the areas of prevention, rehabilitation, and integration, mainly because of the lack of coordination, the anarchic distribution of resources, and the lack of information and dissemination regarding the problem of disability.

Despite the fact that by law 4.0% of the jobs have been reserved for disabled workers in government agencies and companies, that there are several NGOs devoted to providing labor collaboration, and that the Ministry of Labor has an employment service, it has not been possible to expand the coverage of labor force integration.

Argentina trains all the specific human resources it needs. The country has five medical residencies plus four schools for physical therapy, four for occupational therapy, nine for audiology, 15 for psychology, 11 for psychopedagogy, 24 for social work, one for orthesis and prosthesis, and one for music therapy.

Brazil

A study conducted in Salvador, Bahia, in 1988 to compare the prevalence of disability in two areas where the socioeconomic level was different showed that 8.0% of the population living in low-income neighborhoods had disabilities: 6.2% physical and 1.8% mental. On the other hand, in the higher-income populations, the prevalence was 2.5%: 1.9% physical and 0.7% mental.

A household survey carried out by the IBGE Foundation in Sao Paulo in 1981 showed a prevalence of 1.7%. Of this population, only 8.5% were connected with some association and 11.0% were receiving some form of care (81.9% medical, 10.3% rehabilitation, 0.2% professional rehabilitation). This same survey showed that mental deficiency is the leading

cause of disability (31.3%); physical disability is second (24.0%); and problems of communication, including deafness, third (13.0%). An analysis of the data obtained from a national household sampling survey in the metropolitan area of Sao Paulo (PNAD-IBGE-1981) revealed that 6.0% of the population had some form of disability.

In terms of age distribution, the population most affected was the over-60 group, with 21.0%. The group 0-9 years of age had 7.6% disability. Only 2.9% of the disabled persons were receiving rehabilitation care. Of the 120 institutions identified in the study, 35.0% cared for mental disabilities, 27.0% for physical, 20.0% for visual, 9.0% for communication, and 9.0% for multiple disabilities.

Of the of institutions concerned with physical disabilities, 77.0% were for disabled persons and only 23.0% were organized and directed by disabled persons.

The establishment of the National Coordination for Integration of the Disabled marked an important change in national policy for this area, since it expressed the political will to provide equal opportunities for disabled persons.

Brazil has considerable professional and technical resources for rehabilitation, but there are still areas that lack services.

Special note should be made of the facilities for the manufacture of ortheses and prostheses in Sao Paulo, which are among the best in the Region. Since 1962 this center has been training technicians not only for the Region but for developing countries elsewhere as well.

Another important fact is the decentralization of services that is taking place in Sao Paulo.

Chile

In 1988 a survey for the identification of disability carried out in Bio-Bio showed a prevalence of 2.4%, with physical disability as the leading type, followed by sensory disability and mental disability in that order. A total of 79.5% of the cases were covered by the National Social Security System, and 85.0% were receiving or had received health care.

In 1989 another survey, undertaken to identify disabilities in the border schools, showed that 15.0% of the students had the following: learning disorders, 46.0%; hearing loss, 8.0%; visual impairment, 27%; mental deficiency, 6.0%; motor damage, 5.0%; epilepsy, 5.0%; and speech disorders, 2.0%.

The actions being carried out in the country have been based on the concept of comprehensive rehabilitation through coordination of the health, education, recreation, sports, and labor sectors, in each case integrated into their overall programming.

At present (1990) Chile has 107 physicians specialized in rehabilitation medicine, 20 medical phoniatricians, 1,500 physical therapists, 350 occupational therapists, and 480 speech therapists.

Uruguay

Despite the fact that the first university chair in physical and rehabilitation medicine in Latin America was established in Uruguay, the services did not evolve as expected after the early 1960s. In this connection it should be recalled that this is the country in the Region with the highest proportion of population 60 years of age and older (14.0%). In a survey of perception of chronic diseases (1984) it was found that 11.8% of the population 60 years of age and older presented an significant degree of deficiency and disability.

As of 1990 Uruguay has 55 medical specialists, one medical phoniatrician, 936 physical therapists, 225 speech therapists, and three occupational therapists.

United States of America

The University of California's Disability Statistics Program in the Institute for Health and Aging estimates that during the period 1983-1985, 14.1% of the country's population had chronic health conditions that limited their activities.

Of the total population, 3.8% cannot carry out basic activities, 5.9% are limited in the principal activities they can carry out in terms of either quantity and quality, and 4.4% are limited in the nonprincipal activities they can perform. Among children 5 years of age and under, 2.2% are limited in their activities. Among children from 5 to 17 years of age, 6.2% have limitations and 4.4% have limitations in school as a result of chronic health conditions.

Of the children 5-17 years of age, 2.6% attend special education schools. Still, 0.3% of the children who require such schooling do not attend. In all, 65.0% of the country's disabled children are enrolled in special schools or special classes, and 89.0% of the children whose parents are aware of their needs for special educacion are receiving it. In the population between 18 and 69 years of age, 11.5% have work limitations as a result of chronic health conditions, including 6.6% who cannot work, and 3.4% of this group are also limited in other activities.

Of the population 5 years and over, 3.6% require assistance in daily basic activities (ADL-IADL). The need for daily assistance in basic activities increases with advancing age. Thus, while in those from 18 to 64 years of age the figure is 2.1%, it increases to 8.0% in the 65-69 age group, and to 46.1% at age 85 or older.

Canada

In 1983-1984 Canada conducted an exhaustive study on health and disability which yielded the following data:

- In the adult population, 12.8% (2,448,000 persons) had some level of disability.

- In the age group 15-24 years, 3.8% reported disability, while in those 65 years and older the percentage rose to 38.6%.

- In the group 15 years of age and older, two thirds of the disabilities were of the motor type; 14.8%, hearing loss; and 7.7%, visual impairment.

- The prevalent disabling conditions among adults were musculo-skeletal conditions, diseases of the connective tissue, arthritis, rheumatism, and hearing loss.

- Of those in the 15-64 year age group who reported disability, 52.2% did not work nor were they seeking work. The figure for the rest of the population was 25.1%.

- A high proportion (43.5%) of those who reported disability had low levels of formal education.

- Of those who reported disability, 53.8% used public transportation.

- Whereas in the general population 30.6% had incomes of $20,000 or more, the proportion among those who reported disability was only 14.5%.

- Income declined with the severity of the disability; only 3.5% of the population with disability had an income of $20,000 or more.

- Those who presented severe disabilities were also those who had lower incomes and who had additional expenses as a result of their condition.

- In the country's population under age 15, 5.7% were identified as disabled. The prevalence ranged from 4.4% in the 0-4 age group to 6.7% in the 10-14 age group.