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HEALTH OF ADULTS

At its 92nd Meeting, the Executive Committee was informed of the meeting held by the Southern Cone countries in April 1984 to discuss the growing importance that programs connected with Adult Health were acquiring in those countries. The Committee, in response to a proposal by the Representative of Uruguay, resolved that this topic would figure in the agenda for its 95th Meeting.

The major demographic, epidemiologic and environmental changes that are taking place in our Region, together with the changes now occurring in life styles, are causing adults and the elderly to assume increasing significance as priority groups.

The subprograms--chronic diseases; mental health, drug dependence and alcohol abuse; health of the elderly; blindness prevention; accident prevention; and health of the disabled--share general and specific strategies, and in particular the prevention and health care strategies in the context of primary health care.

The document presents the objectives, strategies and basic approaches of the technical cooperation under the program, detailed for each of the subprograms, together with the future prospects; the analysis made calls for a serious commitment on the part of the national and international health agencies, who will have to constantly redeploy the limited resources available to meet these growing priority needs.

PAHO will continue collaborating with the Member Governments in the quest for solutions that are best suited to each particular set of circumstances.

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HEALTH OF ADULTS

1. Introduction

The main characteristic of the goal of Health for All by the Year 2000 is its integral dimension, since it views health as one of the components of the level of wellbeing of each community. It goes beyond the bounds of the sickness-no sickness phenomenon to become a social resultant in the context of standard of living and style and quality of life. Furthermore, the countries of the world have identified primary health care as the most important strategy for attaining this goal, which necessarily entails the defining of priorities.

The Plan of Action for Implementing the Regional Strategies for achieving this goal, approved by all the Member Governments of PAHO, places special emphasis on this aspect. The Plan, designed to ensure satisfaction of the health needs of the entire population, and especially those of the underprivileged groups, stresses among the priority areas protection and promotion of the health of special groups, including women and children, workers, the elderly and the disabled.

The Adult Health Program has responsibility for the technical cooperation that PAHO furnishes to the Member Governments for protection and promotion of the health of adults and the elderly.

2. Constitutional bases and resolutions relevant to the Program

2.1 World Strategy for Health for All by the Year 2000, WHO, 1981.

2.2 Health for All by the Year 2000, Strategies, PAHO, 1980.

2.3 Health for All by the Year 2000. Plan of Action for the Implementation of Regional Strategies, PAHO, 1982.

2.4 Seventh General Program of Work of WHO, 1984-1989, and Medium-Term Programs.

2.5 Resolutions of the Governing Bodies of WHO and PAHO, and particularly the following:

2.5.1 CSP12.R18 Prevention of Rheumatic Fever, 1947

Recommends that rheumatic disease be considered a notifiable disease.

2.5.2 CSP15.R24 Control of Diabetes Mellitus, 1958

Recommends drawing up of national programs for diagnosis and proper treatment and care of diabetics.

2.5.3 CD15.R3 Epidemiologic Studies of Epilepsy, 1964

Requests that studies be made of the epidemiology of epilepsy, of the discrimination to which suffers from this condition are subjects, and of the legal aspects of the disease.

2.5.4 CSP17.R36 Creation of National Mental Health Departments, 1966.

Recommends the establishment of national mental health departments and the formulation of national mental health programs for incorporation into the general health plans.

2.5.5 CD19.R34 Control of Cigarette Smoking, 1969

Requests the Director to report on means for controlling cigarette advertising, on methods for warning the public about the dangers involved, and for the control of cigarette smoking in public places.

2.5.6 CD20.R25 Epidemiologic Studies of Drug Dependence, 1971

Recommends that studies be done of the epidemiology of drug dependence.

2.5.7 CD20.R28 Accident Prevention, 1971

Suggests that the Director continue and intensify collaboration with national, intergovernmental and nongovernmental organizations in the field of accident prevention and that advisory services be provided to the countries in the performance of epidemiologic studies, establishment of standards, adoption of control measures and the training of specialized personnel. Recommends coordination of the prevention and control programs, organization of medical care for victims, and adoption of educational and legal measures.

2.5.8 CSP19.R39 Psychiatric Records and Integration of Mental Health into General Health Plans, 1974

Recommends improvement of psychiatric records, correction of the system of psychiatric care, integration of mental health into general health plans, regionalization of the services, promotion of personnel training and of research and expansion of PAHO's cooperation with the countries in these programs.

2.5.9 CD23.R24 Noncommunicable Diseases, 1975

Requests that PAHO collaborate with the countries in epidemiologic studies of chronic diseases for the identification of risk factors; recommends to the countries that they establish technical units for noncommunicable diseases at central level of national health care

systems; asks PAHO to promote and coordinate intercountry programs of an epidemiologic nature and for the demonstration of preventive measures, and to establish a regional technical information system in this area.

2.5.10 Arterial Hypertension, 1978

Recommends to the Director of PAHO that he strengthen the programs for early detection of hypertension and encourage the Governments in that direction. Also, suggests that steps be taken to obtain extrabudgetary funds to strengthen this program.

2.5.11 CD26.R13 Prevention of Blindness, 1979

Requests the Director of PAHO to support the promotion of research, training programs, and the formulation of national and regional plans for the prevention of blindness. Requests the establishment of a Regional Advisory Group on the prevention of blindness, the strengthening of technical advisory services in this field, and the obtaining of extrabudgetary funds for expansion of the program.

2.5.12 CD26.R17 Influence of Malnutrition on Mental Development, 1979

Asks the Director of PAHO to present a document on the latest developments in the understanding of the influence of malnutrition on mental retardation, and to allocate funds for studies in this field with a view to promoting measures for the control of this problem.

2.5.13 CD26.R18 Noncommunicable Diseases, 1979

Recommends that the topic "Noncommunicable Chronic Diseases" be placed on the agenda of the XXVII Meeting of the Directing Council of PAHO.

2.5.14 CD26.R33 Psychosocial Factors and Child Development, 1979

Recommends to the Governments that when drawing up programs they take account of psychosocial factors in child development. Instructs the Director to cooperate with the countries in the conduct of research on psychosocial maturation and to compile an agenda for regional meetings to develop measures for incorporation into the coverage extension programs.

2.5.15 CD27.R16 Noncommunicable Diseases, 1980

Urges the Governments to identify measures for the prevention of noncommunicable diseases and for action on risk factors; urges the study of the problems of the aged; recommends to the countries that in accordance with their priorities, they adopt control measures that are integrated into the activities of the general health services, and asks the Director to support programs for the improved care of the aged.

2.5.16 CE84.R6 Malnutrition and Deficiency-Caused Mental Retardation, 1980

Recommends that a document containing up-to-date information on this subject be distributed.

2.5.17 CE84.R11 Epidemiology of Drug Dependence, 1980

Asks the Director of PAHO to submit a report on the epidemiology of drug dependence and the steps PAHO is taking to address the problem.

2.5.18 CD27.R41 Abuse of Psychotropic and Narcotic Substances, 1980

Asks the Director to prepare a report on the epidemiologic situation and the countries to collaborate in developing and improving their information systems on the subject.

2.5.19 CE86.R30 Care of the Elderly, 1981

Urges the Governments to encourage efforts to promote the health and well-being of the elderly and to establish effective care delivery methods properly integrated into primary health care, and asks the Director to continue cooperating with the Governments in this field and supporting intercountry studies to determine the profile of the problems of the elderly in the Region.

2.5.20 CD28.R41 Care of the Elderly, 1981

Urges the Governments to include provision in their national health plans for health care for the elderly along the lines of the Plan of Action for the implementation regional strategies for the attainment of health for all by the year 2000.

2.5.21 CSP21.R25 Drug Abuse, 1982

Urges the Governments to concentrate the broad spectrum of activities this field, to make their planning multisectoral, and to accede to the international agreements conventions in this area. Asks the Director to continue supporting programs and research.

2.5.22 CD29.R17 Drug Abuse Prevention, 1983

Urges the Governments to make epidemiologic evaluations and develop prevention plans. Urges the Director to give priority to this problem and to strengthen the Secretariat's ability to provide technical support.

2.5.23 CD30.R7 Health of Disabled Persons, 1984

Urges the Member Governments to continue adopting policies and programs for the protection and care of disabled persons and the prevention of causes of disability, and to give special emphasis to the development of family and community-based rehabilitation technologies for use in the programs; asks the Director of PAHO to continue cooperating with the Governments in the adoption of policies and programs for disabled persons.

3. Definition of the problem

The changes in the structure of the population and in the health profiles have resulted in many countries of the Region drawing attention to the growing priority being acquired by the group formed by adults and the elderly.

3.1 The demographic situation*

Achievement of the goal of health for all by the year 2000 will require large-scale and significant social and economic changes, and means that the probable scenario for the next 15 years must be carefully examined.

The demographic aspects of this scenario for the developing countries of Latin America and the Caribbean are characterized by intense population growth, rapid urbanization, a marked downward trend in fertility and an increase in life expectancy at birth 1/.

Total population will double over the 20-year period from 1970 to 2000, rising from 280 million to over 600 million (Table 1). The urban population will triple over the same period, from 160 million to 400 million (Table 2) and the rural population will also grow in absolute terms, though not so fast, from 120 million to 150 million. By the year 2000 the urban population will amount to 64% of the total population as compared with 49% in 1970 2/.

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* Adapted from S.P. Enrlich, Jr. and J. Litvak, "El envejecimiento y los países en desarrollo de la Región de las Américas," Boletín de la Oficina Sanitaria Panamericana 91, 512, 1981.

1/ Pan American Health Organization, Health for All by the Year 2000. Strategies. Washington, D.C., 1980 (Official Document 173).

2/ United Nations, World Population Trends, and Prospects by Country, (1950-2000). New York, 1979. (Document ST/ESA/SER.R/33, 1979).

In parallel with this growth and concentration of population there is expected to be a definite downward trend in fertility and an increase in life expectancy. By the year 2000 the birth rate per 1,000 inhabitants is expected to be 18% lower in Latin America, 35% lower in the Caribbean and 10% lower in Northern America (United States of America and Canada) (Table 3); meanwhile, the mortality rate will drop by 36% in Latin America and 18% in the Caribbean, but rise by 7% in Northern America (Table 4).

If the assumptions as to the mortality trends are correct, by the year 2000, 36 Latin American and Caribbean countries will have a life expectancy of 65 years or more while in 19 of them the life expectancy at birth will be 70 years or more. Only one country will have a life expectancy of less than 60 years (Table 5).

As regards the expected age structure of the population by the year 2000 in Latin America, 220 million persons, i.e., 37%, will be under 14 years and the greater part of the total population, 350 million or 58%, will be between 15 and 64 years old. The aging of the population is marked in North America, where the population over 65 exceeded 11% in 1980 and will reach 12.1% by the year 2000. In Latin America, the percentage over 65 in 1980 was 4.0% and that expected in 2000 is 4.6%. In relative terms, this rise of only 0.6% over 20 years may not seem particularly significant, but in absolute figures it means an increase from 14 million to over 27 million (Table 6). In addition, if one considers the groups made up of those over 45, the age at which the appearance of chronic diseases becomes all the commoner, the population in this group in Latin America will grow by 1.4% from 15.9% to 17.3% of the total, hence an increase of 46 million persons.

This situation raises some important problems for the health sector in the developing countries. All the countries in the Region have identified as vulnerable the population groups living in extreme poverty in the rural and urban areas, and especially children under five and mothers. Moreover, the countries with a marked "aging" trend have also been obliged to designate adults and the elderly as a priority group. Clearly, the strategies for care of this group are different owing to its special needs. With age the number of persons with health problems increases, especially chronic aliments that produce disabilities, with a greater demand for services in the most complex levels of care. This entails the threat of higher health service and social security costs.

As a consequence, the complex factors associated with the increase in the proportion of adults and elderly persons make it essential to identify, investigate and execute innovative strategies for achieving the greatest efficiency and efficacity of the services 3/.

3/ R. S. Blendon and D. E. Rogers, "Cutting Medical Care Costs," JAMA, 250:4, 14 October 1983.

3.2 The epidemiologic situation

The demographic changes already described, together with other sociocultural factors, linked for the greater part to the urbanization and industrialization processes that are playing an important part in disease patterns 4/, are already impacting and will continue to change the epidemiologic situations of the countries of the Region. Notwithstanding the complexity of the description of the health profiles of the different countries and populations, the information available underscores the growing importance of the states of health, risks and injuries connected with the Adult Health Program.

Cardiovascular diseases are the main cause of death in 31 countries of the Region. Malignant tumors occupy second place in Northern America, the Caribbean, Temperate South America, Cuba, Colombia, and Costa Rica. Accidents feature among the five leading causes of death in all the countries, and diabetes mellitus is also among the leading causes in various countries of the different subregions 5/.

Other conditions and injuries such as mental diseases, suicides and other violent causes, neurologic disorders in the elderly, exaggeratedneonsumption of drugs and alcohol, and a range of risk factors for noncommunicable diseases, such as smoking, inadequate diet and obesity, are becoming increasingly prominent in the morbidity figures for certain countries. For example, suicides account for more than 1% of deaths in Canada, Cuba, El Salvador, Puerto Rico, Suriname, Trinidad and Tobago, the United States of America and Uruguay 6/. Drug dependence is a major social problem in the urban areas of the majority of the countries. Obesity and smoking have proven to be significant risk factors in the health on the populations of the Northern America countries, the Caribbean and the Southern Cone of South America.

Measurement of the magnitude of these problems is not possible with the methods routinely used by the health sector, so that to learn their real impact other approaches are needed, many of them indirect, to obtain data that cannot be extracted from the information normally gathered. This is the case with rates of labor absenteeism and disability arising from chronic conditions and sequelae of accidents and cases of violence; data on sales and consumption of alcohol and cigarettes; school dropout rates, personality disorders and drug addiction; social and cultural indicators that identify critical stress situations; and average

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4/ J. M. May, "The Ecology of Human Disease," Annals of the New York Academy of Sciences, 84:789-794, 1960.

5/ Pan American Health Organization, Health Conditions in the Americas, 1977-1980. Washington, D.C., 1982. Scientific Publication 427.

6/ Ibid.

consumption of calories, fats and animal protein of the different population groups. All of these indicators and indexes therefore have to be taken into consideration in order to round out the epidemiologic knowledge of a health program for adults and the elderly.

The situation becomes even more complex if one bears in mind the large differences there are in the hemisphere between subregions, between countries and even within one and the same country, as a result of socioeconomic, cultural, geographic and biological factors. This is a challenge for epidemiologists and planners when seeking to set priorities.

The following examples will serve to illustrate certain of the significant epidemiologic facts. Table 7 provides the data on chief causes of death in the major groups of countries that form the subregions. It will be noted that heart disease and malignant tumors feature prominently for both sexes, as do accidents for men and cerebrovascular disease for women.

Table 8 contrasts the causes of death in two groups of countries with different socioeconomic and demographic conditions, viz. Continental Middle America (Central America and Panama, and Mexico) and Temperate South America (Argentina, Chile, and Uruguay). It should be noted, of course, that there are considerable differences between the countries in Continental Middle America, making this subregion less homogeneous than the Southern Cone. It will be seen in the first place that in adults aged 25-44 and 45-64 the main causes of death vary between the sexes in both proportional and absolute terms. For example, accidents and violent deaths claim many more men than women; cirrhosis of the liver is another major killer of men in Middle America, whereas malignant tumors are commoner among women. In the over-65 group, on the other hand, there are no significant differences between men and women as regards the chief causes of death and the similarities between subregions in the ranking of causes are more obvious. The second interesting fact to be derived from this table is the difference in the magnitude of certain causes of death between subregions. Although heart disease occupies first place in frequency in men 45-64 in the two subregions, the rate for the Southern Cone countries is three times higher than for Middle America. The same applies with regard to malignant tumors. Diabetes mellitus stands out, in that it appears to predominate in the Middle American countries, especially among women, unlike what is observed for other chronic noncommunicable diseases in that subregion and what would be expected in the Southern Cone, where the importance of chronic diseases has been more widely recognized.

At the level of intercountry comparisons, other differences can be detected regarding the behavior of certain diseases. For instance, in the cardiovascular group ischemic heart disease features more predominantly in mortality in Argentina, Cuba, and Trinidad and Tobago, while hypertension is responsible for considerable mortality in the English-speaking countries of the Caribbean and Colombia [7].

7/ Ibid.

Table 9 illustrates another special epidemiologic feature in regard to the occurrence of cancer in Latin American women. This table classifies the countries according to the distribution pattern of deaths due to cancer of the cervix, other parts of the uterus and the breast. Three categories are immediately apparent, based on the predominating relative frequency: countries with a larger proportion of cancer of the cervix, those with a larger proportion of deaths from breast cancer, and those where the proportions of deaths from the two causes are similar. It will be noted that the first category includes the majority of the countries of Latin America and the Caribbean, where the predominance of deaths from cancer of the cervix is well known.

The data available on other chronic diseases such as ischemic heart disease, lung cancer, cancer of the large intestine and of the breast, show a clearcut predominance in the countries with higher socio-economic indicators, in contrast to the predominance of cancer of the stomach and of the cervix in the majority of the less developed countries of Latin America and the Caribbean 8/.

In the same way, among malignant tumors some very particular patterns of geographic distribution of certain primary locations and histologic cancer types are found. The high risk of cancer of the stomach and intestine--among the highest in the world--in Chile, Colombia, Costa Rica, and Venezuela is noteworthy 9/. Cancer of the gall bladder shows an interesting distribution of high risk in Bolivia and Mexico 10/, which is currently the subject of an investigation being carried out with PAHO assistance.

Table 10 presents the leading causes of death in two Southern Cone countries expressed in terms of potential loss of years of life. In Uruguay, deaths from diseases of the circulatory system and cancer top the list, while in Chile, accidents and cirrhosis of the liver account for a large percentage of years of life lost.

8/ Ibid.

9/ Information from the Member Countries to PAHO. Health Statistics Program.
Cancer Incidence in Five Continents. Volume IV. IARC, Lyon, France, 1982.

10/ Conference and Workshop on Cancer Epidemiology in Latin America. Opportunities for Collaborative Research. Journal of the National Cancer Institute, 70:979-985, 1983.

The data on morbidity from the national morbidity survey and the surveys on specific prevalence together with the cancer records also document the importance and priority of the diseases forming the subject of the Adult Health Program. Arterial hypertension ranks among the most significant, due to its magnitude and wide distribution. The available data confirm prevalence rates of the order of 10-15% in adults in the different countries 11/.

Diabetes mellitus displays a greater variability and the present information points to a prevalence of between 2 and 8% in adult populations in the Region 12/.

The group of chronic rheumatic diseases occupies the attention of the health services in some countries because of the heavy medical care burden they entail. This is the case of Argentina, Brazil, Chile, Colombia, Costa Rica, Mexico, Uruguay, and Venezuela, as is demonstrated by the data from a collaborative intercountry descriptive study coordinated by PAHO and concluded recently 13/.

Certain data on causes of disabilities and labor absenteeism reinforce the information on the importance of the chronic degenerative diseases. For instance, in Brazil the three main causes of disability among urban dwellers insured by the National Social Welfare Institute in 1978 were arterial hypertension, osteoarthritis and neuroses 14/. In Uruguay, the 1982 national Family Health survey underscored the magnitude of the problems caused by disabilities (Table 11).

There are also intra-country differences in the geographic distribution of the problems considered. For example, in the countries already mentioned where the risk of cancer of the stomach is high, there are clearly defined locations of high and low risk. Cancer of the

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11/ J. Litvak, H. Boffi, Z. Pisa, and T. Strasser, "International Programs in Blood Pressure Control," Bulletin of the Pan American Health Organization, 13(4):354, 1979.

12/ J. Litvak, "La diabetes mellitus, un desafío para los países de la Región." Boletín de la Oficina Sanitaria Panamericana, 79(4):281, 1975.

13/ Pan American Health Organization, Report of the meeting of the Advisory Study Group on Control of the Chronic Rheumatic Diseases. Washington, D.C., March, 1983.

14/ Country Profile and Analysis. PAHO, Brazil, 1984.

esophagus is a high-risk problem in the populations of southern Brazil, Uruguay, and northern Argentina 15/. In Peru, arterial hypertension and coronary cardiopathy have a much higher prevalence in the populations of the coast, compared with those living at higher altitudes 16/. Differences in the frequency of these diseases have also been documented between regions of Colombia 17/.

To sum up, the epidemiologic evidence makes it possible to identify two major trends:

- Transition from predominance of mortality from infectious and parasitic diseases to that from chronic noncommunicable diseases, especially cardiovascular diseases and malignant tumors.

- Progressive increase in morbidity from pathologies associated with modern life, and the importance of high-risk factors for health that are interconnected in complex casual networks, all of which calls for preventive actions at various levels.

In conclusion, the heterogeneity of the Region and the fast changes taking place in the epidemiologic profiles of the majority of the countries are making it necessary to strengthen both the epidemiologic capacity of the health programs, so as to be able to arrive at more precise situation diagnoses, and the development of program actions appropriate for adults and the elderly.

4. Components or Subprograms of PAHO's Health of Adults Program

a) Chronic diseases (including cancer)
b) Mental health (including drug dependence and alcohol abuse)
c) Health of the elderly
d) Blindness prevention
e) Accident prevention
f) Health of the disabled

15/ Data compiled in the Adult Health Program, PAHO.

16/ L. Ruiz, and D. Peñaloza, "Altitude and Hypertension," Mayo Clinic Proceedings, 52:442, 1977.

17/ E. de Restrepo, "Epidemiología de enfermedades cardiovasculares," Fundamentos de medicina. Corporación para Investigaciones Biológicas, Colombia, 1981.

5. Objectives

The general objective of the Program is to collaborate with the Member Governments in the formulation, execution and evaluation of health policies and programs for the adult and elderly population, based on proper understanding of their social, cultural, economic and political situation. The aim is to bring about, through the cooperation strategies and approaches discussed in the following, promotion of the health and quality of life of these groups, together with the prevention and treatment of disabilities, and rehabilitation. The objectives and specific activities of the Program are set forth in each of its components or subprograms.

6. Strategies

Analysis of the multiple factors that determine the health of the adult calls for a serious commitment on the part of the national health agencies. The varied nature of the risk factors, some of them determined genetically and others present since an individual's early years, points up the need for constant action on these factors during a person's entire life by means of activities integrated into all the levels of the health system and progressively tied in with other economic and social sectors.

The scope of the Health of Adults Program is not accordingly conceived strictly in terms of the harm that can occur in this vulnerable group comprising adults and the elderly. On the contrary, all its components have a spectrum of comprehensive integral cooperation covering activities to prevent and control harm and to promote and care for health from the prenatal period through old age. The general and specific strategies of the Program are oriented along these lines.

6.1 General strategies

6.1.1 Mobilization of national resources and formation of collaboration networks

The Program identifies and supports groups, institutions or centers oriented toward service, research and training in health that facilitate joint actions in specific priority areas. This serves as a basis for rendering both intra and intercountry cooperation more effective [18/]. In the description of the components of subprograms, special emphasis is placed on this strategy, as in, among others, the Collaborative Cancer Treatment Research Program (CCTRP).

18/ Pan American Health Organization, Managerial Strategy for the Optimal Use of PAHO/WHO Resources in Direct Support of Member Governments. Washington, D.C. (Document CD29/13).

6.1.2 Technical Cooperation between Developing Countries (TCDC) and between developed and developing countries

The interlinking of the groups, institutions and centers referred to, besides constituting a support system for the regional programs, facilitates the development of the TCDC strategies. The particular characteristics of the subprograms making up the Health of Adults Program, the scientific and technical bases of which are permanently under review, make it advisable on some occasions also to link these networks to centers in developed countries. Horizontal knowledge transfer and collaboration, as well as north-south collaboration, is important for the strengthening of the secondary and tertiary levels of care, for the incorporation of preventive and promotional measures of proven efficiency effectiveness, and for research on technology and technology development.

6.1.3 Coordination

Coordination of the Adult Health Program, both among its subprograms and with other PAHO programs, is essential. The health of adults and the elderly is inseparable from the more general promotion and prevention activities concerning the health of the individual and of the community, and from health care activities.

The Program emphasizes the country as coordination level, through the articulation or integration of the intra and interprogram technical cooperation activities with the countries' programs.

The primary care strategies, development of the health infrastructure, the intercountry and regional support mechanisms for the strategies, and the evaluation and monitoring systems, are common to all the PAHO programs and accordingly make it essential to set up sufficiently flexible mechanisms that allow appropriate coordination of the program activities in the countries.

6.2 Specific strategies

6.2.1 Monitoring of the situation

The defining of priorities for technical cooperation has to be based on objective conclusions regarding the health situation derived from a comprehensive analysis of all the available information on the actual political, technical and operational circumstances of the countries. This is seen to be all the more important in the light of the rapid changes occurring in this situation in the Region.

To be able to rationally plan the technical cooperation to be furnished under the Program, and to clearly spell out the short, medium and long-term actions to be undertaken, one must have an adequate knowledge of the past circumstances of the countries of the Region. Work is accordingly under way on generation of a data base that will enable continuous diagnosis of the situation of the health problems and programs.

As a result of this approach, the Health of Adults Program is documenting, through the regional program for monitoring the integrated chronic disease control programs (MORE Project), the distribution in the Region of the health problems that affect the adult, the unequal development of the specific control activities or programs and also the uneven potential of the operating capacity of the public systems.

6.2.2 Prevention of harm and promotion of health

The increase in life expectancy in the countries of the Region, together with the change in the morbidity and mortality profiles pointing to a distinct trend towards predominance of chronic diseases and accidents, underscore the importance of this strategy. The Program must necessarily concern itself with protecting the health of the high-risk groups and the collective promotion of health through action against risk factors that operate even before birth. Preventive measures directed toward the general population and others focusing on high-risk individuals are not mutually exclusive but are on the contrary complementary 19/. Attempts to modify national dietary habits in order to prevent coronary cardiopathy, for instance, can be implemented while the medical care services are concentrating their attention on dietary advice to those at greatest risk.

The high-risk strategy and the whole-population strategy, together with secondary and tertiary prevention, accordingly receive the main emphasis in the control of chronic noncommunicable diseases in particular, and in protection and promotion of the health of the adult in general.

6.2.3 Health care

As already noted, primary health care involves identification of levels of care of increasing complexity. This is especially true in the Health of Adults Program, in which the greater part of the control program technologies call for more specialized and hence more costly levels. For this reason the Program places special emphasis on rationalization of these levels of care, promoting the establishment of care standards, for the different levels,* the trying-out of operating models in health services, the evaluation of technologies and institutional strengthening.

19/ G. Rose, "Sick Individuals and Sick Populations," Inst. J. Epidemiol. 14:32, 1985.
R. Doll, "Prospects for Prevention," British Medical Journal, 286, 5 February 1983.

* The Health of Adults Program has published a set of operating manuals that are used in the several subprograms: rheumatic fever and rheumatic cardiopathy, arterial hypertension, diabetes mellitus, cervical cancer, blindness prevention, community-based rehabilitation, and community psychiatry.

6.2.4 Integration

During the past thirty years, prominent chronic diseases such as arterial hypertension, coronary cardiopathy, rheumatic fever, cancer of the cervix, diabetes and others, have been the subject of intense descriptive, analytic and applied epidemiologic research. The findings of these studies have provided the bases for initiating control measures for particular diseases, but at the same time it has been repeatedly pointed out that the extensive constellation of causes means a multiplicity of effects, with a relationship between the "web of causes" and the "web of effects" that is particularly evident when one considers the noncommunicable diseases as a whole.

One can, therefore, deduce that a set of effective control activities with adequate coverage and applied for long enough would be capable of modifying a number of the health problems afflicting a given population.

Viewed from this angle, an integrated program for the prevention and control of noncommunicable diseases is one that combines, in an operationally feasible manner, resources and activities formerly concentrated on just one disease, in the prevention and control of a number of ailments. The object is to achieve a greater impact on the overall health of the population at a lower cost.

Integration in the programs to control chronic diseases, or in the integral approaches to protection and promotion of adult health, accordingly displays various characteristics:

a) Integration of prevention and control strategies

Meshing within a process of integral care for the population of the secondary prevention, high-risk and whole-population strategies.

b) Integration of activities and resources

Reorientation of resources previously allocated to execution of dispersed activities to the common aim of achieving better health for adults and the elderly.

c) Integration of the general health services

The control programs for chronic diseases must form a harmonious part of the total health care of the population, with emphasis on primary care.

d) Integration of disciplines

Consistent multidisciplinary work in the aspects of social science, behavioral and health aspects is proposed.

e) Intrasectoral and intersectoral integration

The activities of the health sector, and those derived from the participation of other sectors such as education, legislation and economic aspects, etc., are inseparable in the integral approach to the prevention of harm and the promotion of health.

It is obvious that in the case of adult health care it will not be possible to satisfy all the above-enumerated aspects in the immediate future; integration is accordingly viewed in the initial phase as the consolidation of the specific control programs or activities by disease or disability and the adoption of stage-wise measures for their integration proper.

Finally, special attention is being paid to the integration of prevention and control activities in various dimensions: by approaching the main diseases and risk factors as one whole, incorporating the actions into the general health services in all their levels of care and developing new actions for which the concept of promotion and protection of the health of adults and the elderly is the program thrust. Within the Region there are areas where the need to integrate the activities or programs currently in operation has been recognized, so that the need is now to channel this into the quest for more effectively integrated operating schemes that incorporate the individual (secondary prevention and high-risk) and whole-population strategies in programs that are appropriate for the times and places in question.

7. Basic approaches of the program cooperation

7.1 Direct technical cooperation

The Regional Program, through its human and physical technical cooperation resources, collaborates directly with the field offices, complementing the activities identified jointly with the health authorities and promoting those deriving from the directives of the Governing Bodies. Continuous analysis of the health situation will facilitate this cooperation, fostering the promotion, integration and coordination of activities inside and outside of the Program.

7.2 Training

The Program cooperates with the countries in the training of personnel for the different levels of complexity of the health services system. To this end, it backs the training of staff in the numbers and quality required for the needs of the countries' prevention and control programs. It further cooperates in community education regarding promotion and protection of health through psychosocial activities and public health actions in general.

7.3 Research

The research component in the Program seeks to improve epidemiologic understanding of the magnitude and determinants or main risk factors involved in the natural history of the acute and chronic noncommunicable disorders, sequelae of communicable diseases, addictions, accidents, etc. It also stimulates study of the operation of health services and of the needs of the elderly through collaborative intercountry projects. It promotes basic research to the extent that this favors the transfer of knowledge gained from the control programs. Special mention should be made of the search for integrated models of adult health protection and promotion, together with the quest for better understanding of the social factors that prompt decisions for action in the countries of the Region. The research priorities of the Health of Adults Program were submitted to the XXIII Meeting of the PAHO Committee on Health Research in 1984 (see Annex).

7.4 Dissemination of information

The Program seeks to gather, analyze and selectively disseminate appropriate information to allow the defining of priorities and the formulation of programs, together with technical and scientific information that will facilitate the administration of the programs in the different levels of care.

8. Description of the program

8.1 Chronic diseases

PAHO collaborates with the Governments of the Region in the formulation of policies and programs for control of the chronic noncommunicable diseases, based on the countries' epidemiologic situation, the feasibility of primary and secondary prevention, and the availability of the resources needed for the programs. Special emphasis has been placed on supporting the organization, within the health ministries, of technical units responsible for formulating such policies and standards, in the conviction that this will favor the integration of the programs into the general health systems. In accordance with the foregoing, the chronic diseases subprogram has assumed the following objectives:

- To provide technical cooperation to the countries of the Region that need to define and/or to better understand their situation in regard to chronic noncommunicable diseases.

- To promote and cooperate with the development of integrated community-based control programs and with the proper organization of diagnostic, treatment and rehabilitation services for the chronic noncommunicable diseases.

- To stimulate and support research on critical aspects of knowledge regarding the epidemiology, prevention and control of the chronic noncommunicable diseases, promoting the effective application of the new knowledge gained in the provision of services to the community.

- To promote and support the training of personnel of all program levels in epidemiology, prevention and control of the most prevalent chronic noncommunicable diseases.

- To gather and selectively disseminate the information necessary for the defining of priorities and the administration of the national control programs.

To achieve these objectives, mainly the following strategies are being applied:

a) Promotion at individual and population level of the prevention of harm and the promotion of health

In the Region, the United States of America has stressed over the past 20 years the importance of promoting health and preventing disease, especially the chronic diseases and accidents, in the formulation of its objectives and goals for improving the state of health of its population 20/. During this period, a series of projects and programs has demonstrated, for example, the feasibility of influencing the main determinants of cardiovascular disease, such as the high blood lipid level generally associated with unsuitable diet, lack of exercise and being overweight, arterial hypertension and smoking. In this period, mortality from cardiovascular disease in the United States has changed significantly, with a downward trend that is more marked than in any of the other causes 21/. Clearly, the national control programs have to provide the population with preventive and curative services, increase its understanding of health, persuade it to make changes, give training in behavior changes, bring about the necessary modifications in the environment to support the new forms of behavior and gain community participation in decisions and action on the program's needs. Available world experience suggests that education activities in health should have clear objectives and be supported in their efforts to bring about

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20/ United States Public Health Service, Promoting Health/Preventing Disease. Public Health Service Implementation Plans for Attaining of the Objective for the Nation. (Public Health Reports. PHS 83-50193), 1983.

21/ National Institutes of Health of the United States of America, Working Group on Epidemiology of the Cardiopathies. Report of the National Heart, Lung and Blood Institute. (NIH Publication No. 79-1667), 1979.

changes in behavior and innovations, and publicize and spur desirable modifications. For actions of this type to lead to significant changes in life styles, unhealthy habits and exposure to harmful environmental factors, it is necessary that policy, planning, development and the national commitments coincide in the context of the promotion and protection of health.

b) Promotion of the integration of prevention and control activities concerning the main diseases and risk factors and, at the same time, of this set of actions with the general health services in all care levels

On the basis of the accumulated experience in the control of certain of these diseases, such as arterial hypertension, diabetes, rheumatic fever, cancer of the cervix, etc., an integral approach is being fostered in the designing of health promotion actions and the control of risk factors and harm, within the general health services, with emphasis on primary care. With PAHO support, integrated chronic disease prevention and control programs are being initiated on a limited scale in Brazil, Cuba and Venezuela, with a view to progressive extension of their coverage.

c) Stimulation and support of the organization of diagnostic, treatment and rehabilitation services appropriate to the complexity of the most prevalent diseases

The chronic noncommunicable diseases, generally in their more advanced stages, constitute a significant proportion of the demand for medical and hospital care in the majority of the countries of the Region. The mounting costs that this situation is imposing on the public health services justifies evaluation and rationalization of these services, in parallel with developments in the prevention sphere. The formulation of diagnosis and treatment norms and the evaluation of technologies are central to this approach.

d) Promotion and support of the monitoring of the activities or programs to control chronic noncommunicable diseases, in the national, subregional and regional plans

In mid-1983 PAHO proposed a project to monitor the integrated control activities or programs for chronic diseases in the countries of the Region (MORE Project), one of the aims of which is to contribute toward better planning of the cooperation activities. This measure will facilitate meeting the needs of the Member Countries in accordance with their real social and sanitary conditions. Within this context, the Southern Cone countries (Argentina, Chile, and Uruguay), meeting in Punta del Este, Uruguay, in April 1984, discussed

possible subregional strategies for coping with the high frequency of chronic diseases by combining the resources of the three countries. Work was recently started on the three main lines of research (strategic planning, integrated programs and health services) in support of the MORE Project, together with preparation of the respective basic agreements.

8.1.2 Cardiovascular diseases

The methods for preventing and controlling rheumatic fever and cardiopathy which have contributed to the spectacular decline in the magnitude of the disease in the developed countries are well known. However, it still persists at relatively high rates in many countries of the Region. Eight countries (Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Peru, and Venezuela) have participated in a collaborative project on secondary prevention of rheumatic fever in the community. It was observed that the programs that had the lowest prophylaxis dropout rate were those that were incorporated into the health services and included participation of local health centers and auxiliary personnel. The working group prepared a manual of operating rules for the control of rheumatic fever [22/] that was made available to the Member Governments in 1980. At the present time, Bolivia, El Salvador and Jamaica are initiating intensive prevention of rheumatic fever cardiopathy, with PAHO assistance. This activity is part of a joint project with WHO and will be financed with special extrabudgetary funds.

The need to strengthen the activities to do with arterial hypertension control was pointed out by the Executive Committee in 1978 [23/]. Between 1976 and 1981 a total of 10 countries (Argentina, Bolivia, Brazil, Chile, Colombia, Cuba, Ecuador, Mexico, Peru and Venezuela) took part in a collaborative study on control of arterial hypertension, coordinated by PAHO. This study demonstrated the feasibility of secondary prevention in the community and the importance of the general health services to the success of a hypertension control program. The accumulated experience served as a basis for formulating rules for hypertension control that were published in 1984 [24/]. PAHO has collaborated with various countries in the formulation of hypertension control programs and in national workshops organized for the purpose.

22/ Pan American Health Organization, Prevention and Control of Rheumatic Fever in the Community, Operating Rules for a Program to Extend Coverage to the Different Levels of Care. Washington, D.C., 1980.

23/ Pan American Health Organization, Executive Committee, 80th Meeting, Arterial Hypertension, CE80.R6, 1978.

24/ Pan American Health Organization. La hipertensión arterial como problema de salud comunitario. Washington, D.C. 1984. (Paltex Series for primary health workers, No. 3).

As already noted, the trend toward lower mortality from cardiovascular disease in the industrial countries shows that these diseases are preventable or controllable provided it is possible to act on the chief risk factors 25/.

In 1982, PAHO started a project designed to study the effect of diet changes on the natural history of cardiovascular diseases in Brazil, Jamaica and Mexico. In 1984, a group of experts on smoking and health drew up possible future lines of action for PAHO, together with strategies for the promotion of policies and actions in the countries, for discussion at a Southern Cone subregional meeting at the end of 1985. Strategies for acting on the main cardiovascular risk factors are also being tried out as part of integrated approaches to noncommunicable disease control in Argentina, Brazil, Chile, Costa Rica, Cuba, Uruguay, and Venezuela.

8.1.3 Cancer

Malignant neoplasms as a group are placed second, after cardiopathies, among the chief causes of death for all ages in the countries of the Americas 26/. They also feature among the five leading causes of death in 30 out of 37 countries.

Certain of the difficulties of the international programs connected with cancer control arise from the lack of uniformity in nomenclature.

In addition, as with any other public health problem, the prime requisite for the planning of cancer control programs has to be proper determination of the magnitude and nature of the problem. To this end, PAHO is assisting with the establishment of hospital and population records of the disease in countries interested in setting up such record systems.

A modular course for physicians and officials responsible for records has been prepared that uses the Manual for Standardization of Hospital Cancer Registries 27/ and other standardized material, such as the

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25/ P. Puska, et al. "The Community-based Strategy to Prevent Coronary Heart Disease: Conclusions from the 10 Years of the North Karelia Project," Annual Review of Public Health (in press).

26/ Health Conditions in the Americas, 1977-1980. Op. cit.

27/ Pan American Health Organization, Manual for the Standardization of Hospital Cancer Registries. (Scientific Publication 349, in Spanish and Portuguese. Available in English as Publication (Offset) No. 25 of WHO, Geneva).

International Classification of Diseases for Oncology (CIE-0) 28/ and the TNM system of the International Union against Cancer for the stage of the cancer 29/. The first course for Latin America was held in Costa Rica in 1978, and for the English-speaking Caribbean countries in Barbados in 1982. The most recent courses of this type were held in the Bahamas (1984) and Brazil (1985).

The available information has corroborated the high frequency of cervico-uterine cancer and the greater risk of this form of the disease among the less-privileged socioeconomic strata. This situation led PAHO to set up a group of experts to propose rules and procedures for control of this type of cancer 30/, which were recently revised and updated by a second group of consultants 31/; it is hoped that use of this manual will help to improve the execution of the programs. The situation, however, remains unpromising, owing particularly to the low coverage of the measures. The problems connected with control of this disease were accordingly discussed at a regional seminar held in Mexico in January 1984. On the basis of that meeting's recommendations, PAHO is supporting evaluation of the present programs and reformulation of the control activities, while efforts are also being made to identify the program adjustments necessary to make a greater impact on mortality from this cancer. This approach has been begun recently in Barbados, Brazil, Colombia, Honduras, Nicaragua and the Dominican Republic, and it is hoped to extend it shortly to other countries.

The strengthening of the specialized centers is an important measure when the function of the different care levels in the cancer control programs has to be defined. This facilitates the dissemination of rules and guidelines and makes it easier to apply present knowledge in the control measures. A large part of PAHO's work in support of this aspect of the cancer control programs is done through the Latin American Cancer Research Information Project (LACRIP) and the Collaborative Cancer Treatment Research Program (CCTRP). These joint PAHO/National Cancer Institute (USA) projects are largely financed with extrabudgetary resources.

28/ Pan American Health Organization, International Classification of Diseases for Oncology. Washington, D.C., 1977. (Scientific Publication 345, in Spanish and Portuguese. Available in English as a publication of WHO, Geneva, 1976).

29/ International Union Against Cancer, Classification of Malignant Tumors by the TNM System. Geneva, 1974.

30/ Pan American Health Organization, Manual of Standards and Procedures for the Control of Cancer of the Cervix. Washington, D.C., 1972 (Scientific Publication 248).

31/ Pan American Health Organization, Manual de Normas y Procedimientos para el Control de Cáncer del Cuello Uterino. Washington, D.C., 1985. (Serie Paltex para Trabajadores Primarios de Salud. In press).

LACRIP gathers information on cancer through publications, research projects and clinical protocols produced in Latin America, for inclusion in the CANCERLINE data bank. In its turn, LACRIP then selectively disseminates information from this data bank to health personnel working on cancer, by means of updates in 15 different topics four times a year. More than 3,400 subscribers in 22 countries of the Region receive these publications. In addition, over the last six years more than 6,000 bibliographic searches have been furnished on request to researchers who have requested them.

The Collaborative Cancer Treatment Research Program (CCTRP) comprises 13 cancer centers in nine Latin American countries (Argentina, Brazil, Chile, Colombia, Costa Rica, Mexico, Peru, Uruguay and Venezuela) plus 10 centers in the United States of America. A total of 26 Latin American institutions participate as associates. Sixty protocols have been drafted and approved since the program was started. Thirty-six have been completed and 23 are still active. The chief results of these studies have been in the better utilization of chemotherapy treatment that is now apparent in the countries of the Region.

More than 50 summaries or articles have been published by the project 32/. CCTRP has shown itself to be an essential tool in the promotion of clinical research at international level and in identifying the most suitable treatments for each type of tumor, and also for promoting standardized use of these treatments in the institutions or countries 33/.

With regard to cancer chemotherapy, the availability of the antineoplastic drugs known to be effective against curable cancers (acute lymphoblastic leukemia, testicular tumor of germinal cells, Hodgkin's disease, Wilms' tumor, etc.) needs to be reviewed, together with training in their use 34/. PAHO is accordingly preparing a project on procurement and rational use of antineoplastic drugs that will be presented to the Member Governments in the course of this year. The Government of the Bahamas has already taken the initiative in this direction.

32/ Pan American Health Organization, Proceedings, Seventh Annual Workshop of the Collaborative Cancer Treatment Research Program. Washington, D.C., May 15-17, 1985.

33/ S. Pavlovsky and J. Litvak, "Multidisciplinary Consideration of Cancer Therapy in Latin America." International Radiation Oncology Biological Physics, 10: Sup. 1, 77-80, 1984.

34/ S. Pavlovsky, F. Muggia, and F. Sackman, "Disponibilidad y uso racional de drogas esenciales en el tratamiento del cáncer." Boletín de la Oficina Sanitaria Panamericana. (In press).

Since the frequency and distribution of tumors differ in the Region, in mid-1982 PAHO, in collaboration with the National Cancer Institute (NCI) of the United States, organized a regional meeting to review the epidemiology of cancer in Latin America and the Caribbean 35/. The collaborative investigations deriving from this analysis will make it possible to learn more about the natural history of certain malignant neoplasms, such as that of the gall bladder (Bolivia and Mexico), cancer of the stomach (Chile, Costa Rica and Venezuela) and cancer of the esophagus (southern Brazil, northern Uruguay and Argentina).

In the Region, the lack of sufficiently trained personnel is often the main obstacle to an effective cancer control program. PAHO organized a regional course in the epidemiology of cancer that was held for the first time in Costa Rica in May 1984, at that Government's request. In the same year an international workshop was organized in Chile for clinicians and oncologists on statistics applied to the epidemiology and control of cancer.

Finally, PAHO has collaborated with WHO in the preparation of guidelines for the formulation of national cancer programs in developing countries. This document 36/ stresses the development or starting of cancer control activities as an integral part of national health plans, together with the allocation of resources in such a way as to reach the greater part of the population at risk.

8.1.4 Diabetes mellitus

The Plan of Action for the Regional Strategies for Achieving the Goal of Health for All by the Year 2000 recommends reducing the impact of diabetes within the context of control programs aimed at it and other chronic diseases associated with excessive weight, such as obesity and arteriosclerosis. PAHO accordingly formed a committee of experts to determine the significance of this disease as a public health problem and to formulate recommendations with a view to preparation and execution of control programs 37/. PAHO subsequently drew up a manual of rules and

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35/ Conference and Workshop on Cancer Epidemiology in Latin America. Op. cit.

36/ World Health Organization, Guiding Principles for Formulation of National Cancer Programs in Developing Countries. Report of a Joint WHO/EURO Meeting. Geneva, 4-7 October, 1983.

37/ Pan American Health Organization, Study Group on Diabetes Mellitus. Washington, D.C. (Scientific Publication 312).

procedures to facilitate the planning and execution of a control program integrated with the general health services, which has recently been made available to Member Governments 38/.

8.1.5 Other noncommunicable diseases

The chronic rheumatic diseases are a frequent cause of morbidity and prolonged disability, restricting the active life of very many people. To evaluate the degree of disability and dependence of the patients affected by these pathologies, and the characteristics of the demand for medical services, PAHO coordinated a collaborative study with centers in Argentina, Brazil, Chile, Mexico, Uruguay and Venezuela. The resulting observations will shortly be systematized in the form of rules for diagnosis and treatment, which will serve as a basis for more effective planning of secondary and tertiary prevention of these diseases.

In addition, in conjunction with the Epidemiology Committee of the Pan American League against Rheumatism and the National Institutes of Health (NIADDK/NIH), a workshop will be held in Costa Rica in July 1985 to identify areas for collaborative epidemiologic research in the Region.

The chronic allergic diseases also give rise to a considerable demand for medical care. This prompted a collaborative study of centers in eight countries to investigate the characteristics of allergic patients and their exposure to potentially harmful factors in the environment 39/. As a result of this study, it is intended to adapt a care manual for the countries of the Region, in collaboration with the Latin American Allergy Society and the American Academy of Allergy and Immunology 40/.

8.2 Mental health, drug dependence and alcohol abuse

The directives of PAHO's Governing Bodies on mental health activities point up the need to establish national mental health programs incorporated into the general health plans, recommend the extending of the care and prevention services in mental health to the entire population by means of the general srategies adopted by the countries, identify certain problems and conditions as being of singular importance for the Region (epilepsy, mental retardation, alcoholism, drug dependence, insufficient coverage of psychiatric care services) and underscore the importance of psychosocial factors in the natural history of many diseases.

38/ Pan American Health Organization, Manual de Normas Técnicas y Administrativas del Programa de Diabetes Mellitus. Washington, D.C., 1985 (Paltex Series for primary health workers).

39/ Pan American Health Organization, Estudio Colaborativo sobre Enfermedades Alérgicas. Informe Final. October 1983.

40/ "Primer on Allergic and Immunologic Diseases, American Academy of Allergy and Immunology," Journal of the American Medical Association, Vol. 248, No. 20, Nov. 26, 1982.

The priority areas established in accordance with the legal basis referred to and taking into account the Region's mental problems profile can be summarized under the following heads:

- Reorganization of the psychiatric care services through modernization of the institutions and provision of alternatives to hospitalization.

- Prevention and control of mental disorders highly prevalent in the Region, including alcoholism and drug dependence.

- Control of psychosocial factors (life styles) that favor both somatic and mental pathologies.

This set of priorities has determined the areas of collaboration in the Region, and mental health programs have been carried out in 22 countries. During the 1960s the most important mental health problems were analyzed at three meetings held in Mexico City, Buenos Aires and Kingston 41/, laying the foundations for a regional program. In 1978 a group of experts from the Region met in Cali, Colombia 42/ and outlined more precisely the priorities, approaches and strategies for the Region. In the past 10 years, the majority of the countries have carried out care and prevention plans and programs by means of workshops, working groups and seminars with the participation of PAHO advisors.

The objective of the program is to bring about a reduction in the countries of the most widespread neurological and mental disorders that are amenable to prevention and control, by means of:

- The establishment of national prevention, care and rehabilitation programs.

- The provision of minimum mental health services to the entire population.

- The modification of behavior that entails risks for physical and mental health.

41/ See the following reports:

Pan American Health Organization, First Latin American Seminar on Mental Health. 1963. (Scientific Publication 81).
Pan American Health Organization, Second Latin American Seminar on Mental Health. 1964. (Scientific Publication 99).
Pan American Health Organization, Seminar on Mental Health in the Caribbean. Final Report. Kingston, Jamaica, September 1965. (Mimeographed).

(42) Pan American Health Organization, Perspectivas de la salud mental en América Latina. Working Group Report. Cali, Colombia, April 1978. PAHO, 1974 (Mimeographed).

The strategies for achieving these objectives are consistent with the global strategies of WHO and can be summed up as follows:

- Monitoring of the mental health situation in the countries by means of a permanent inventory of resources, analysis of the satisfied demand, determination of the magnitude and distribution of mental pathology in individual countries and periodic evaluation by means of epidemiologic studies. PAHO has collaborated with Argentina, Brazil, Colombia, Costa Rica, Chile, Honduras, Mexico, Peru and Venezuela in the conducting of epidemiologic studies of mental diseases, alcoholism and drug dependence and the perfecting of the gathering and processing of statistical data.

- Determination of the resources available in the countries and adopting of measures for their better utilization. Institutions and programs carrying out innovative activities that could be easily applied elsewhere are singled out. Exemplary teaching, research and service centers that could be used to enrich the resources and try out novel care, prevention and rehabilitation methods have been identified. In this way a network of collaborating centers located in Argentina, Barbados, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, Mexico, Peru, and Venezuela has been set up, through which technical cooperation between the countries in mental health, alcoholism, drug dependence and neurological sciences is being actively promoted.

- Strengthening of the primary level of care by introducing into it a mental health component and facilitating support to the secondary and tertiary levels. Courses, continuing education programs and education in the services available in mental health, addictions and alcoholism are provided. A psychiatry manual for primary health workers has been prepared and tested in the field [43]; a manual on epilepsy has been made available to general practitioners and nurses [44]; a videocassette on alcoholism and drug dependence and another on family therapy have been produced, while training courses in mental health for primary health workers have been given in five countries.

43/ Pan American Health Organization, Manual de Psiquiatría para Trabajadores de Atención Primaria. Washington, D.C., 1983 (Paltex Series for Middle and Auxiliary Technicians, No. 1).

44/ Pan American Health Organization, Epilepsy: Manual for Health Workers. Washington, D.C., 1983. (Scientific Publication 447).

- Dissemination of technical information on mental health through the setting up of a bibliographic search service and the periodic transmission of scientific information to the mental health departments of the health ministries and the network of collaborating centers.

- Promotion of legislation on protection of the family and minors, protection and rehabilitation of mental patients and the abolition of discrimination against mental patients, the retarded and epileptics.

- Creation of national advisory groups that will help to determine needs and to shape and execute care and prevention programs. Assistance is presently being given to the establishment of national groups in various countries of the Caribbean with a view to setting up a multinational group that will work toward specific actions in support of mental health.

- Support for research, especially in connection with the role of psychosocial factors, the influence of the environment and the effectiveness of the services provided to persons with mental health problems.

- Education of the public, particularly in stress management, correction of unhealthy habits, coping with crises and the setting up of self-help mechanisms.

Subprograms: The mental health program comprises three distinct categories of activities that give rise to a corresponding number of subprograms:

a) Psychosocial factors in prevention, health promotion and human development

The psychosocial factors subprogram seeks, through application of behavioral science, to change behaviors that favor disease 45/. It also seeks to place this knowledge at the service of the general health programs so that the services offered may be more consistent with the sociocultural characteristics of the population and to foster more effective utilization of them. An important aspect of the subprogram is the promotion of balanced psychosocial development through protection and promotion measures directed at the mother-child dyad. Of special interest for the subprogram is the study, with a view

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45/ R. González U., Aspectos psicosociales. Pan American Health Organization, 1984. Working document presented at the Meeting of the Southern Cone countries on the Chronic Disease Control Program, Punta del Este, Uruguay, April 1984 (Mimeographed).

to prevention, of violent behavior (suicide, homicide, and accidents) and the consequences of human uprooting. This subprogram is of recent date, cooperation activities with collaborating centers in Canada, Cuba and the United States having been begun in 1984.

b) Prevention and control of alcohol abuse and drug dependence

The problems connected with alcohol abuse and drug dependence have increased markedly in the Region, so that their prevention and control form the aim of the second subprogram. The topic was discussed by the Directing Council in 1980 and 1983 46/ and by the Pan American Sanitary Conference in 1982. One of the approaches used consists of the development of monitoring and recording systems. The prevention programs promoted in the countries are of a multisectoral nature, aiming both to reduce the availability of alcohol and drugs and to lessen the demand for them by educating the public, especially young people. Compliance by the countries with international treaties on the control of psychotropic and narcotic substances is promoted by means of technical support and the exchange of information 47/. Attention has been drawn to the close association between alcohol and drug abuse and the high proportion of deaths and disabilities due to traffic accidents in the Region. The main activities of the subprograms are aimed at developing policies, establishing services and support for research and personnel training in these fields. PAHO, with the support of the United Nations Fund for Drug Abuse Control, has cooperated with the Governments in the launching of programs to control drug dependence in Bolivia, Colombia, Ecuador, Paraguay, and Peru, with an emphasis on epidemiologic research and personnel training.

c) Prevention and treatment of mental and neurological disorders

The prevention and treatment of mental and neurological disorders is the oldest of the subprograms and maintains cooperation activities in all the countries of the Region. Prevention of psychic disorders of organic origin, mental retardation and certain neurological disorders that are

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46/ Pan American Health Organization, Directing Council, XXIX Meeting, Drug Abuse Prevention. CD29/22, Washington, D.C., September 1983.

47/ VI Conferencia de los Estados Parte del Acuerdo Sudamericano sobre Estupefacientes y Psicotrópicos. Informe sobre el período de noviembre 1983 a octubre 1984, Bogotá, 1984.

widespread in the Region, is closely bound up with the development of public health programs such as the Expanded Program on Immunization, improvement of obstetric and pediatric care, environmental sanitation and control of infectious diseases. In 1980 a meeting was held in Washington that examined the influence of malnutrition on mental development, the working documents of which were issued as a technical publication 48/. In collaboration with the National Institute of Neurology, Communicable Diseases and Cerebrovascular Accidents of the United States of America and cooperating centers in Chile, Ecuador, Mexico, Peru and Venezuela, a study was made in 1984 of the prevalence of neurological diseases. Preventive actions, such as support for the family group, crisis intervention, psychosocial stimulation of children and strengthening of the social support networks, are elements the introduction of which into the national mental health programs is being actively promoted. However, it is secondary and tertiary prevention, i.e., early psychiatric care and rehabilitation, which are the most prominent components of the program and which take up the bulk of the national mental health resources. PAHO is cooperating with the countries in the establishment of new policies that place less emphasis on hospitalization in asylums and other institutions and focus more on the provision of services in the community, in the integral health establishments 49/. The cooperation programs are angled particularly toward the extending of services to unprotected populations through the training of primary health workers in the diagnosing of the more important syndromes and their immediate management, with the support of the more complex care levels. More than a half of the psychiatric patients hospitalized in the Region have been confined for a number of years, and improvement and expansion of rehabilitation activities is an urgent need. PAHO is collaborating with certain countries in this field, but much remains to be done. The rehabilitation of chronic mental patients is therefore a challenge that must be taken up by PAHO and the countries.

48/ H. N. Ricciuti, J. Cravioto, and E. Pollit, Environment, Nutrition and Mental Development. Washington, D.C., PAHO, 1983 (Scientific Publication 450).

49/ Ministry of Health of Chile and Pan American Health Organization, II Jornadas Nacionales sobre Nivel Primario de Atención en Salud Mental, Santiago, Chile, December 1980. Santiago, Chile (Mimeograph).

8.3 Health of the elderly

The goal of health for all by the year 2000 and the regional strategies for achieving it embrace the entire population. However, the Plan of Action for implementing the regional strategies gave priority to some special groups, including the elderly, because they are more vulnerable than others.

The increase in this age group is having a significant impact on the health and social security services (see 3.1: Demographic Situation). Rural-urban migration is further aggravating the problem of demand for services. In the United States of America, 80% of the elderly population suffers from one or more chronic disorders, and the corresponding medical care represents around 30% of the nation's health costs 50/. The morbidity and mortality among persons 65 and over is relatively comparable among different countries, independent of their level of development; as a result, the aging of the population entails a risk of a global increase in the cost of medical care in the Region.

The PAHO program goes beyond the traditional medical aspects and aims at incorporation of the health sector into the wider context of improving the quality of life for the aged. While particular importance is still assigned to the family, women are now featuring increasingly in the work force in developing countries, so that the traditional structure of the extended family is changing.

The purpose of the program is to promote the independence of the elderly to the maximum extent in the Member Countries, avoiding institutionalization as far as possible. Important factors contributing to this objective are: participation by the family and community, day care for the otherwise fit elderly, help with housework and the principles of caring for themselves that are taught to the elderly.

Furthermore, in pursuance of the recommendations of the World Assembly on Aging 51/, the program has established the following strategies:

- Promotion of evaluation of the situation and adoption of policies for care of the elderly population:

  . Performance at national level of demographic and epidemiologic studies that will define the magnitude of the present problems and make it possible to draw up projections.

50/ United States Government, Department of Health and Human Services. Public Health Service, Surgeon General's Report on Health Promotion and Disease Prevention. 1979. (Publication 79-55071).

51/ United Nations, Report of the World Assembly on Aging. Vienna, Austria, 26 July-6 August, 1982.

. Determination of the characteristics of the elderly population.

. Adoption of national policies for meeting the social and health needs of the elderly groups.

- Promotion of the development of integral care for the elderly in the general health services:

. Development of programming approaches and techniques for incorporating the needs of the elderly into rural and urban development programs.

. Definition of activities by levels of care for the care of the elderly.

. Studies to increase what is known about the availability of services for care of the elderly and to reorient institutional care.

. Inclusion of epidemiologists and social scientists in the study of the problems of caring for the elderly.

- Stimulation of promotion and implementation of community action programs:

. Development of education programs and information material to stimulate and guide moves toward self-care and noninstitutional care, for the elderly population.

. Promotion of the development and coordination of community services to take care of the social needs of the elderly, such as social centers and home help.

. Promotion of the participation of community groups in the development of programs for the social and vocational reorientation of the elderly.

- Orienting the development of human resources:

. Training of regular health service personnel in the problems of the elderly, by levels of care.

. Incorporation of the primary care approach into the training of specialists in gerontology and geriatrics.

To achieve the objective of the program through the above-described strategies, the following activities in particular are being carried out:

PAHO is coordinating a collaborative research project to obtain epidemiologic information on the needs of the elderly in 10 countries of

the Region 52/: Argentina, Barbados, Chile, Colombia, Costa Rica, Cuba, El Salvador, Guyana, Honduras and Jamaica. The study has adopted the form of a household survey designed to obtain the required information through the perception of the old people themselves. Three of the participating countries have already completed the gathering of the data and the rest are expected to do so in the course of this year. The information from this study, together with the data already available in other countries, such as Mexico and Uruguay, will make it possible to define the policies and programs of care of the elderly at both country and regional level with a sound epidemiologic basis. To this end, in 1984 PAHO organized an orientation meeting on policies for care of the elderly for the countries participating in this study 53/. The main emphasis of this meeting, which was held with the collaboration of the WHO Global Program for the Health of the Elderly and the W. K. Kellogg Foundation, was in the discussion of alternatives--other than institutionalzation--for care of the elderly; of the role of the community, the family and the elderly themselves in the programs; and of the socioeconomic implications of the growth of this age group.

Similar workshops, but aimed specifically at subregional groups, will be held in the course of this year for the Southern Cone and Central American countries.

The program has also provided direct technical cooperation for these purposes to Argentina, Barbados, Brazil, Chile, Colombia, Costa Rica, Cuba and Jamaica.

Two WHO collaborating centers are participating actively in the regional program: the National Institute of Aging (NIA/NIH) of the United States and Duke University. A working committee has been formed with the first-named institution to identify areas of collaborative research in the Region and possibilities of training personnel for the programs.

8.4 Blindness prevention

Two thirds of the cases of blindness in the Region are estimated to be due to preventable causes and/or to be curable, a large proportion

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52/ Pan American Health Organization, Health of Adults Program, General Plan of Action for the Establishment of Policies and Programs for the Elderly Population in the Americas. 1983.

53/ Pan American Health Organization, Políticas de atención de los ancianos. Washington, D.C., October 1984. PAHO Scientific Publication in preparation.

of them being of infectious or nutrition-related origin, or else due to nonoperated cataract 54/. There is accordingly a need for systematic, community-level programs capable of modifying this situation.

The purpose of the program is to reduce "preventable blindness" in the countries of the Region through application of simple, low-cost measures (preventive and curative) that lend themselves to large-scale application through the primary health care services. The following strategies have been adopted for this purpose:

- Developing in the countries an interest in the establishment or strengthening of programs designed to control pathologies that cause preventable blindness.

- Promoting clinical and epidemiologic research that will make it possible to establish the magnitude and characteristics of the problems that cause blindness, and appropriate technologies for their control.

- Developing suitable teaching materials for use by primary and secondary-level health personnel.

- Collaborating with nongovernmental organizations concerned with the prevention of blindness and treatment, education and rehabilitation of the sight-impaired, so that the work of these organizations can be integrated with that of the specific national programs.

The aim of the program is to ensure that by 1989 at least half of the developing countries in the Region will have set up blindness-prevention programs, or provided essential eye care or access to referral services in communities where such care is not presently available.

- The regional program collaborates with PAHO's field offices in the execution of the technical cooperation activities identified with the national authorities. Special attention is paid to diagnosis of the situation, together with prevention and control measures. The program has furnished cooperation to Barbados, Bolivia, Brazil, Cuba, Guatemala, Haiti, Peru, and Venezuela.

- The identification and mobilization of national resources connected with blindness prevention programs has proven of great value in the establishment of an accurate situation diagnosis and in the planning of consistent programs and the furthering of special activities. The regional program uses the national

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54/ World Health Organization, Strategies for the Prevention of Blindness in National Programs. A Primary Health Care Approach. Geneva, 1984.

national system of institutions for the conducting of certain of its activities. Brazil, Costa Rica, Guatemala and Peru offer excellent examples in which the national institutions are acquiring significant permanent roles in the planning, execution and evaluation of blindness prevention activities at national and regional level. There are WHO collaborating centers in blindness prevention in Brazil and Guatemala.

- The program has placed special emphasis on collaboration with Member Governments in the formulation and updating of norms, following the concept that eye care in general and blindness prevention in particular should form part of the general health services, with a view to extending coverage and actions to benefit the least privileged groups.

- One activity that has received special attention is the preparation of instructional and informative material on preventive blindness. The regional program has prepared a Manual of Primary Eye Care 55/, in English and Spanish, for se by auxiliary personnel in the parts of the Region not served by specialists. It is also preparing, with the collaboration of the Program Advisory Committee, basic ophthalmologic material for use by general practitioners in areas where there are few if any ophthalmologists 56/. The Manual of Primary Eye Care was used successfully in mid-1984 in a course for primary health promoters in Guatemala. The Regional Program also translated into Spanish and reproduced the poster produced by the International Eye Foundation, which was distributed to the Member Countries.

- The research side of the program is angled particularly toward operations-type research that facilitates the extending of coverage by strengthening the eye care services in all levels of care. PAHO, with the WHO collaborating centers, Johns Hopkins University and the Francis Proctor Foundation of California, collaborated with the Mexican Government in the clinical and epidemiologic characterization of trachoma in some communities of Chiapas State; the conclusions of this study stress the importance of personal hygiene in the occurrence, extent and seriousness of this infectious disease 57/.

55/ Pan American Health Organization, Manual of Primary Eye Care. Washington, D.C., 1984 (Paltex Series for middle technicians and auxiliaries, No. 4).

56/ Pan American Health Organization, Third Meeting of the PAHO Advisory Committee on Blindness Prevention. Final Report. Caracas, July, 1984.

57/ H. R. Taylor, F. Millan-Velasco and A. Sommer, The Epidemiological Characterization of Trachoma in "Los altos de Chiapas" (in press).

Also in the context of the research side of the program, technical advice is currently being provided to the Guatemalan Government in the planning of a survey of the prevalence of blindness-causing diseases; the Johns Hopkins University is also collaborating in this project.

- The program has established excellent relations with many non-governmental organizations working in this field. In November 1983 a seminar was held in Barbados to draw up a Coordinated Plan of Action on Blindness Prevention for the English-speaking Caribbean countries, in conjunction with organizations active in the Region, such as the International Eye Foundation, Helen Keller International, etc. 58/. Helen Keller International is also playing a significant role in Peru, in the implementation of primary eye care programs in three different areas of the country.

- A subsidy was recently obtained from AGFUND (Arab Fund for Assistance to Developing Countries) for a primary eye care project in nine countries of the Region (Belize, Bolivia, Ecuador, El Salvador, Guyana, Haiti, Honduras, Nicaragua and Paraguay). This project includes an important auxiliary personnel training component for the programs.

8.5 Accident prevention

Accidents, particularly traffic accidents, have become one of the main causes of injuries, disabilities and deaths in the Region, especially among young people. It is estimated that every traffic accident death represents, on average, a loss of around 30 years/person of life expectancy, this figure being considerably lower for cardio-vascular diseases and cancer, which rank higher as causes of death among the general population 59/.

Determining the real situation with regard to traffic accidents is not easy because there is no uniform system in the countries for ensuring complete and reliable data on the recording of the facts, neither is there any uniformity in the nomenclature employed. As an example, the recording of the major fact as regards traffic accidents--i.e., mortality--can be cited; some countries only record through the police or traffic authorities those deaths that occur on the spot, which are approximately

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58/ Caribbean Seminar on the Prevention of Blindness and Glaucoma Workshop, Final Report. Barbados, November 15-17, 1983.

59/ Pan American Health Organization, Health of Adults Program, Accidentes de tráfico en las Américas. Situación actual y perspectivas. Washington, D.C., 1984.

45-55% of the actual deaths due to road accidents. This practice leads to significant errors in the calculation of the relevant rates 60/.

The purpose of the program is to support the creation, adaptation, use and evaluation of methods designed to foster accident prevention and the establishment of national accident prevention programs and development of safety technologies.

The strategies used to achieve these objectives are:

- Promotion of the gathering, interpretation and use of data to illustrate scientific management of the traffic accident problem;

- Encouragement of the preparation and use of uniform nomenclature and information systems;

- Promotion of the carrying out of operational-type epidemiologic studies in order to identify the various factors that play a part in the occurrence of traffic accidents in each country or locality, such as those of a psychosocial nature, including alcohol and drug consumption;

- Stimulation and orientation of the formulation of policies and programs of a preventive nature capable of swaying public opinion and thereby mobilizing community participation in coming to grips with this growing problem; and

- Promotion of proper coordination between official agencies, mainly in the health, education, police and transportation sectors, and between them and the nongovernmental institutions (national and international) concerned with and/or responsible for prevention and control of traffic accidents.

The following activities, in particular, are carried out in order to achieve the above aims:

- A study of 15 countries of the Region was made in 1984, which revealed (Table 12) that the mortality rates per 100,000 inhabitants increased in percentage terms in 10 of them between 1969 and 1980, with reductions posted only in the cases of Argentina (-40%), Chile (-26.4%), El Salvador (-15.4%), United States of America (-21.6%) and the Dominican Republic (-15.6%). In general, the mortality rates per 100,000 inhabitants in 1980

60/ S. I. Bangdiwala, E. Anzola-Pérez, and I. M. Glizer, "Some Statistical Considerations for the Interpretation of Commonly Utilized Road Traffic Accident Indicators." Submitted for publication, Accident Analysis and Prevention, 1985.

in the countries studied ranged between 6.7 in the Dominican Republic and 37.4 in Venezuela. The same study also showed that in 13 of the countries the motorization rates, i.e., the ratio of vehicles to population, increased by between 12 and 875%, and only dropped (by 8.6%) in one case.

- PAHO organized two workshops, one held in Barbados 61/ and another recently in Colombia. In both cases the program developed technical materials that made it possible to draw up a situation diagnosis with regard to traffic accidents and to design an effective plan of action. The Barbados workshop was attended by delegates from 10 English-speaking Caribbean countries representing the police, transportation and health sectors. In the course of the sessions the definition of a traffic accident death (i.e., a death that occurs within 30 days of the event) suggested by the United Nations was adopted unanimously, and a form incorporating relevant questions for the three main sectors was designed for the recording of traffic accidents. The recommendations of this workshop were approved by the Conference of Caribbean Ministers responsible for Health held in Dominica 25-27 July 1984. Among other things, these recommendations call for the immediate formation of multi-sectoral commissions for the prevention of traffic accidents and the designation of CAREC as focal point for activities connected with epidemiologic surveillance, research and training/education.

  The workshop in Colombia was attended by delegates from various medium-size population centers with different epidemiologic characteristics. In this instance, PAHO's cooperation was furnished in conjunction with the World Bank. A request for technical cooperation from Argentina was also met in the course of the year.

- PAHO has coordinated its activities with those of the WHO Global Program and has concluded a number of agreements on traffic accident prevention with other agencies. Two specific areas for joint action have been identified with the World Bank: establishment of a process for improving the basic information system on road safety and preparation of a manual on technologies of value in preventing or controlling traffic accidents, in collaboration with the United Kingdom's Traffic and Transport Research Laboratory. The possibilities of this joint technical cooperation approach will be made the subject of a study in two countries.

61/ Pan American Health Organization, Workshop on the Prevention and Care of Motor Vehicle Injuries in the Caribbean, Final Report. Bridgetown, Barbados, June 12-15, 1984.

- With regard to other accidents, there is special interest in preventing those that can occur in childhood. During the November 1984 Pediatrics Congress in Havana a workshop sponsored by WHO and PAHO was held at which the methodology tried out in Cuba concerning the epidemiologic and clinical characteristics of childhood accidents was discussed 62/. A protocol for collaborative research in four countries of the Region using this methodology is currently being prepared.

8.6 Health of the Disabled

The program for Health of the Disabled was submitted to the Directing Council of PAHO at its XXX Meeting in 1984 (Document CD30.14), and Resolution VII on the subject was approved.

On that occasion the conceptual bases and references for the program were reviewed and the activities carried out since the International Year of Disabled Persons (1981) were presented. The main objective of the program was identified as being support to Member Governments in the formulation of policies and implementation of programs designed to promote knowledge and understanding of the problem of disability and handicaps, their prevention, and treatment of the greatest number of disabled persons.

The following strategies were presented for the achievement of this objective:

a) Promotion of the integration of disability prevention and of rehabilitation into the health services system, within the framework of primary care

In the Region, the establishment of excessively centralized and vertical care and rehabilitation systems has proven to be a negative factor, since it is seriously holding up the dissemination of knowledge, the extending of coverage and the effective use of national resources, while generally slowing care of the health of the disabled. In addition, the lack of clear policies and of a reliable and up-to-date information system has led to duplication of certain activities by different sectors and a total neglect of others, while yet others are assigned low priority by all the sectors.

The appropriate strategy for remedying this situation is rehabilitation medicine in the general health services.

62/ World Health Organization, Workshop on Research Development in Childhood Accidents. Havana, Nov. 15-16, 1984. Summary Report. Copenhagen, Denmark, 1984.

The portal to rehabilitation is health, and should be incorporated as a therapeutic component of medical care 63/.

The varied nature of the risk factors and the characteristics already described underscore the need to incorporate prevention and rehabilitation actions into the general health services, in all levels of complexity and throughout the life of the individual.

The program proposes a care system of increasing complexity, in accordance with the primary care strategy. Its implementation will facilitate the extending of care coverage to the disabled, particularly with the incorporation of community-based rehabilitation.

b) Promotion of the mechanisms for participation by the individual, the family and the community and the process of disability prevention and rehabilitation

The application of simple technologies, in the promoting of community involvement and in the field of ortheses and prostheses, has made significant advances. Application of community-based rehabilitation has enabled better use to be made of institutional resources by those genuinely in need of the more complex services 64/.

Since 1981, PAHO has been collaborating in the application of community-based rehabilitation. The program covers persons with general, social, educational, and home rehabilitation problems, as well as functional movement, vision, hearing and speech problems.

This technology must continue to be applied in the countries to the extent possible; it will have to be adapted to national requirements and be consistent with the cultural backgrounds involved, so that it can be extended to human groups who live in difficult conditions, especially those in the low-income areas of big cities and among displaced populations.

63/ United Nations Economic Commission for Latin America, Report of the Regional Technical Meeting and of the Regional Seminar on Preparatory Activities for the International Year of Disabled Persons. 1981 (E/CEPAL/Conf.72/L.9/-Rev. 1).

64/ Pan American Health Organization, Community-Based Rehabilitation (CBR). Training Manual for Disabled Persons. (Paltex Series, PAHO, in preparation).

Community-based rehabilitation will only be successful when it has the support of the community, of the health authorities (local and central), and of the education and social action authorities, and when it forms part of a comprehensive care system. It should therefore only be put into effect when these requirements are met. Once the countries have gained experience with this technology, duly adapted to their particular circumstances, community-based rehabilitation can be extended to any area that meets and satisfies these criteria, with appropriate training courses being organized for the health personnel in the community 65/.

c) Stimulation of the development of intra and extrasectoral human resources in disability prevention and rehabilitation

The countries will have to analyze the human resources they possess for developing rehabilitation activities. The concept of rehabilitation as an activity within the health system, integrated with the general health services and the different care levels, differs from the specialization-based approach formerly followed. Information and medical training in the undergraduate and postgraduate stages for physicians, and appropriate training for other health personnel and workers, are therefore required in order to equip them for community-based rehabilitation so that coverage can be extended within the primary care strategy 66/.

No more than 12 countries of the Region are training the full spectrum of professionals for the rehabilitation team, from university-trained specialists to local health workers.

Outside of the health sector, the knowledge and training of professionales in the education and social service areas, together with those responsible for community development and infrastructure, need to be improved in order to remove all structural and related barriers.

Review of the type of personnel and of its professional and technical profile, together with the pedagogic models to be adopted in the basic and advanced training provided, is called for. Steps must also be taken to spur training of the disabled

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65/ United Nations, World Program of Action for Disabled Persons. 1983. A/37/51.

66/ World Health Organization, Training Disabled Persons in the Community: An Experimental Manual on Rehabilitation and Disability Prevention for Developing Countries. 1983.

themselves so that they will be able to support the rehabilitation programs and help change people's understanding of their problems and work toward fuller integration into society.

d) Stimulation of research angled toward greater understanding of disability and its significance

In view of the sparse information on regional and national prevalence of the different disabilities, the behavior of the disabling pathologies and their relations with the risk factors, it is important that epidemiologic studies be carried out at national and regional level. PAHO will promote inter-country collaborative projects to this end. The technology employed in rehabilitation in general is not suited to the actual circumstances prevailing in the great majority of the countries of the Region. Appropriate technologies need to be sought, such as community-based rehabilitation or the manufacture of technical aids, applying simplified technology that will allow the largest number of persons to attain personal independence and free the countries from technological dependence.

In conclusion, it must be stressed that the countries of the Region have done a lot in the way of rehabilitation within the health programs. However, the development of integral programs is still following a highly heterogeneous pattern.

The past decade saw the beginning of a far-reaching change as regards how the problem of disability is viewed and the technologies used for rehabilitation. The new orientations are consistent with the primary care strategy and in particular with the concept of community participation and training.

Among the most important changes now taking place in the programs is the broadening of the spectrum of pathologies, the incorporation of the rehabilitation activities into the general health services in the context of primary care, intra and intersectoral coordination and the participation of the disabled themselves and of the communities in which they live in the search for and application of measures that will bring about a better quality of life for them.

The Member Countries will have to adopt measures and apply techniques that will enable them to advance toward a better quality of life for the disabled. This will, unquestionably, call for a sustained effort during which the number of disabled persons will continue to rise. If this effort is not made, the consequences of the disabilities will be added to the many other obstacles that hold back the process of emergence from underdevelopment. It is therefore imperative that the development plans and programs of the countries of the Region contain immediate measures for disability prevention and for the rehabilitation and social integration of the disabled.

Resolution VII of the Directing Council, adopted in 1984, underscored these points in urging the Member Governments to adopt policies and programs that will ensure the protection of disabled persons, in the context of primary care and based on the family and the community. It also requested the Director of PAHO to continue cooperating with the Governments in furthering adoption of these policies and programs and in the strengthening of the existing regional activities.

In this respect, PAHO has carried out technical cooperation actions that in essence seek to define how the health sector can assist most appropriately and effectively in the rehabilitation process. Assistance has been provided to countries such as Argentina, Belize and Haiti that are developing services in which community participation is the key component. Joint activities have been set up with UNICEF that will be carried out in the Central American countries, and with IMPACT/UNDP to cooperate with the programs of Chile and Saint Lucia in organizing the first level of care in disability prevention.

In consultation with the Member Governments, PAHO has also started an analysis of the human resources that will be needed in developing and implementing the services, and of the undergraduate and postgraduate curriculum contents for medical schools.

PAHO is developing a system for the dissemination of bibliographic information, with the collaboration of the National Institute of Handicapped Research (NIHR) of the United States of America and its National Rehabilitation Information Center (NARIC).

PAHO's Health Program for Disabled Persons, together with the principal aspects of the technical cooperation activities, with emphasis on the community approach, were discussed at a seminar held recently in Washington, D.C., that was attended by representatives of Argentina, Brazil, Chile, Colombia, Ecuador, Haiti, Jamaica, Mexico, Nicaragua, Peru, Saint Lucia, Uruguay and Venezuela.

9. Conclusions and Prospects

The problems connected with the Health of Adults have a biographic aura about them: they have their roots back before conception and extend throughout the life of the individual, even though certain relatively specific morbid conditions are concentrated in the adult years.

The risk factors associated with these conditions and the damage entailed are becoming evident with mounting intensity in the countries of the Region. The Health of Adults Program accordingly places special emphasis on an important prevention strategy, either through identification of individuals at risk or control of factors that determine the incidence rates among the population. Life styles, self-destructive behavior such as tobacco and alcohol consumption, and other psychosocial factors that shape a person's general state of health, exposure to environmental pollution, etc., therefore assume considerable importance in basic and primary prevention. However, no less important

are secondary and tertiary prevention of the diseases forming the subject of the Program and which are still causing disabilities and even high mortality rates in the developing countries of the Region, despite the fact that effective means of control are available. This is the case, for example, with arterial hypertension, diabetes mellitus, rheumatic cardiopathy, cervico-uterine cancer, most cases of blindness, etc.

The nature of the problems faced by the Health of Adults Program underscores, moreover, the importance of the health services area. The majority of the technologies of its control programs call for participation of the most specialized and costly levels of care. Special attention is accordingly being paid to rationalization of these levels of care, by promoting the establishment of norms for the various levels, in the context of primary care. In addition, the trial of operating models in health services, evaluation of technologies and institutional strengthening are being encouraged.

The description of what the Program has done emphasizes these and other general and specific strategies that form the common denominator of its components or subprograms. Furthermore, in describing its basic cooperation approaches, special mention is made of the direct technical cooperation activities, training, research and the dissemination of information. The LACRIP model for cancer, for instance, which it is hoped to extend to the entire Program, is exceptionally important because of the special use it makes of the TCDC strategy and of the identification and mobilization of the internal resources of the countries participating in this information system.

The prospects of the program lie, in general, in the integration approach, in the context of primary health care and with special emphasis on activities conducted in and based on the community itself. The chronic diseases subprogram will continue to encourage this integral approach in the devising of actions to promote health and control the risk factors and harm, within the general health services. Mental health, drug dependence and alcohol abuse activities will continue to promote the establishment of national mental health programs incorporated into the general health plans, and extension of the care and prevention services through the general strategies adopted by each country. The epidemiologic approach will also continue to be stressed in training and education in the programs to prevent and control alcohol abuse and drug dependence. The problem of the health of the elderly requires adoption of intersectoral policies and programs based on accurate understanding of the needs of this group in each country. The Program will continue collaborating with the Member Countries in this. Blindness prevention is especially important in the developing countries of the Region, since it is estimated that two thirds of the cases of blindness in those countries are preventable and/or curable. The Program will accordingly continue to focus on the establishment of community-level programs applying preventive and curative measures integrated into the general health services. Accident prevention calls for an intersectoral approach that will continue to be pursued at the national level, together

with interagency coordination at the international level. Finally, the health of the disabled subprogram will continue to foster integration of disability prevention and rehabilitation into the health services within the context of primary care. The application of community-based rehabilitation will allow more effective use of institutional resources by and for those who need the more complex services.

In conclusion, the important demographic, environmental and life-style changes that are taking place in the Region point up how adults and the elderly are acquiring ever-increasing significance as priority human groups. Analysis of the factors associated with this problem calls for a serious commitment on the part of the national and international health agencies, who will have to make special efforts to redeploy the limited resources available to meet these growing priorities. PAHO, for its part, is ready to collaborate with the Member Governments in the search for solutions that are best suited to each country's particular circumstances.

Table 1. Region of the Americas

Population estimates, 1970-2000*

	Population (millions)			
	1970	1980	1990	2000
Entire Region	509.1	614.8	748.9	897.7
Latin America and Caribbean	282.7	368.5	478.4	608.1
Northern America	226.4	246.3	270.5	289.6

* United Nations, Population Division, 1979.

Table 2. Region of the Americas

Urban population estimates, 1970-2000*

	Urban population (millions)		Percentage of total population	
	1970	2000	1970	2000
Entire Region	329.7	690.0	64.8	76.9
Latin America and Caribbean	161.7	439.8	49.0	63.7
Northern America	167.9	250.1	74.2	86.4

* United Nations, Population Division, 1979.

Table 3. Region of the Americas

Gross birth rates per 1,000 population, 1970-2000*

	1970-1975	1995-2000	Change (%)
Latin America	36.4	29.7	-18
Caribbean	30.1	19.6	-35
Northern America	15.8	14.2	-10

* Adapted from: Health for All by the Year 2000. Strategies. Offical Document 173. PAHO, 1980.

Table 4. Region of the Americas

Gross mortality rates per 1,000 population, 1970-2000*

	1970-1975	1995-2000	Change (%)
Latin America	9.4	6.0	-36
Caribbean	7.2	5.9	-18
Northern America	9.2	9.8	+ 7

* Adapted from: Health for All by the Year 2000. Strategies. Official Document 173. PAHO, 1980.

Table 5. Region of the Americas

Life expectancy at birth (31 countries), 1965-2000*

			Year 2000	
	1965-1970	1995-2000	No. of countries 65 years and over	No. of countries 70 years and over
Entire Region (31)	64.9	71.1	28	21
Latin America (21)	60.0	70.4	18	11
Caribbean (8)	66.7	73.2	8	8
Northern America (2)	70.6	72.5	2	2

* United Nations, Population Division, 1979.

Table 6. Region of the Americas

Population Distribution by Age, 1980-2000*

	Population by age groups (millions) 1980					Population by age groups (millions) 2000					
	Total	-15	15-64	65+	%	Total	-15	15-64	65+	%	+%
Entire Region	614.8	205.9	366.7	42.1	6.9	897.6	288.8	545.6	63.0	7.0	0.1
Latin America	361.5	147.6	199.1	14.6	4.0	599.0	223.3	348.2	27.4	4.6	0.6
Caribbean	6.9	2.6	3.7	0.3	5.4	9.0	2.6	5.8	0.5	6.1	0.7
Northern America	246.3	55.5	163.6	27.1	11.0	289.5	62.8	191.6	35.0	12.1	1.1

* United Nations, Population Division, 1979.

Table 7. Five leading causes of death (Classification of Diseases, 8th Revision). All ages, by sex, selected countries from each subregion (1977-1980)

Subregion and leading causes	TOTAL				MEN				WOMEN			
	Rank order	Number	Rate	Percentage	Rank order	Number	Rate	Percentage	Rank order	Number	Rate	Percentage
Northern America												
Total deaths	-	168,179	716.0	100.0	-	97,115	831.6	100.0	-	71,064	601.6	100.0
Heart disease (390-429)	1	58,086	247.3	34.5	1	33,955	290.8	35.0	1	24,131	204.3	34.0
Malignant neoplasms (140-209)	2	37,189	158.3	22.1	2	20,845	178.5	21.5	2	16,344	138.4	23.0
Cerebrovascular disease (430-438)	3	15,183	64.6	9.0	4	7,004	60.0	7.2	3	8,179	69.2	11.5
Accidents (E800-E949, E980-E989)	4	12,023	51.2	7.1	3	8,424	72.1	8.7	4	3,599	30.5	5.1
Influenza and pneumonia (470-474, 480-486)	5	5,131	21.8	3.1	5	2,844	24.4	2.9	5	2,287	19.4	3.2
English-speaking Caribbean												
Total deaths	-	2,050	773.0	100.0	-	923	729.1	100.0	-	1,127	813.1	100.0
Heart disease (390-429)	1	460	173.5	22.4	1	200	158.0	21.7	1	260	187.6	23.1
Malignant neoplasms (140-209)	2	344	129.7	16.8	2	175	138.2	19.0	3	169	121.9	15.9
Cerebrovascular disease (430-438)	3	298	112.4	14.5	3	108	85.3	11.7	2	190	137.1	16.0
Diabetes mellitus (250)	4	113	42.6	5.5	-	27	21.3	2.9	4	86	62.0	7.6
Influenza and pneumonia (470-474, 480-486)	5	105	39.6	5.1	5	53	41.9	5.7	5	52	37.5	4.6
Accidents (E800-E944, E980-E989)	-	95	35.8	4.6	4	63	49.8	6.8	-	32	23.1	2.8
Continental Middle America												
Total deaths	-	9,143	421.3	100.0	-	5,294	483.8	100.0	-	3,849	357.8	100.0
Heart disease (390-429)	1	1,526	70.3	14.7	1	874	79.4	16.5	2	652	60.6	16.9
Malignant neoplasms (140-209)	2	1,491	68.7	16.3	2	810	74.0	15.3	1	681	63.3	17.7
Accidents (E800-E949, E980-E989)	3	967	44.6	10.6	3	797	72.8	15.1	5	170	15.8	4.4
Causes of perinatal mortality (760-779)	4	590	27.2	6.5	4	360	32.9	6.8	4	230	21.4	6.0
Cerebrovascular disease (430-438)	5	550	25.3	6.0	5	256	23.4	4.8	3	294	27.3	7.6
Tropical South America												
Total deaths	-	72,470	552.3	100.0	-	41,197	627.0	100.0	-	31,273	477.3	100.0
Heart disease (390-429)	1	10,827	82.5	14.9	2	6,020	91.6	14.6	1	4,807	73.4	15.4
Accidents (E800-E949, E980-E989)	2	8,573	65.3	11.8	1	6,717	102.2	16.3	-	1,856	28.3	5.9
Malignant neoplasms (140-209)	3	7,009	53.4	9.7	2	3,314	50.4	8.0	2	3,695	56.4	11.8
Causes of perinatal mortality (760-779)	4	5,308	40.5	9.7	3	3,097	47.1	7.5	3	2,211	33.7	7.1
Cerebrovascular disease (430-438)	5	4,223	32.2	5.8	-	2,051	31.2	5.0	4	2,172	33.2	6.9
Influenza and pneumonia (470-474, 480-486)	-	4,170	32.8	5.8	5	2,183	33.2	5.3	5	1,987	30.3	6.4
Temperate South America												
Total deaths	-	74,178	679.4	100.0	-	41,119	760.5	100.0	-	33,059	599.9	100.0
Malignants neoplasms (140-209)	1	11,237	102.9	15.1	2	5,576	103.1	13.6	1	5,661	102.7	17.1
Heart disease (390-429)	2	10,110	92.6	13.6	3	5,274	97.5	12.8	2	4,836	87.8	14.6
Accidents (E800-E949, E980-E989)	3	7,280	16.7	9.8	1	5,649	104.5	13.7	5	1,631	29.6	4.9
Cerebrovascular disease (430-438)	4	6,395	58.6	8.6	5	2,958	54.7	7.2	3	3,437	62.4	10.4
Influenza and pneumonia (470-474, 480-486)	5	5,639	51.7	7.6	4	2,995	55.4	7.3	4	2,644	48.0	8.0

Table 8. Five leading causes of death in population aged 25-44, 45-64 and 65 years and over. Percentage of deaths, rate per 100,000 population by sex and around 1978. Continental Middle America and Temperate South America Subregions

MEN			WOMEN		
Causes[a/]	Rate	Percentage	Causes	Rate	Percentage
25-44 years					
Continental Middle America					
Accidents	142.2	31.3	Heart disease	28.1	10.5
Homicide, legal intervention and war operations	61.9	13.6	Malignant tumors	25.9	9.7
Cirrhosis of liver	33.0	7.3	Complications of pregnancy, childbirth and puerperium	24.8	9.3
Heart disease	28.5	6.3	Accidents	21.8	8.1
Influenza and pneumonia	20.3	4.5	Influenza and pneumonia	16.5	6.2
Temperate South America					
Accidents	88.3	29.8	Malignant tumors	38.1	21.5
Heart disease	42.1	14.2	Heart disease	22.4	12.7
Malignant tumors	31.2	10.5	Accidents	18.0	10.2
Cirrhosis of liver	18.4	6.2	Cerebrovascular disease	11.3	6.4
Suicide	13.7	4.6	Complications of pregnancy, childbirth and puerperium	9.7	5.5
45-64 años					
Continental Middle America					
Heart disease	185.0	14.3	Malignant tumors	147.2	17.2
Accidents	163.1	12.6	Heart disease	134.3	15.7
Cirrhosis of liver	122.9	9.5	Diabetes mellitus	60.3	7.0
Malignant tumors	99.3	7.7	Influenza and pneumonia	51.7	6.0
Influenza and pneumonia	75.0	5.8	Cerebrovascular disease	49.2	5.8
Temperate South America					
Heart disease	385.9	27.4	Malignant tumors	220.4	31.4
Malignant tumors	318.1	22.6	Heart disease	142.0	20.2
Cerebrovascular disease	125.5	8.9	Cerebrovascular disease	81.5	11.6
Accidents	107.9	7.7	Cirrhosis of liver	27.9	4.0
Cirrhosis of liver	88.1	6.3	Accidents	26.2	3.7
65 years and over					
Continental Middle America					
Heart disease	1.245.1	20.5	Heart disease	1.225.9	22.2
Influenza and pneumonia	602.0	9.9	Influenza and pneumonia	558.5	10.1
Malignant tumors	505.6	8.3	Malignant tumors	477.4	8.7
Cerebrovascular disease	367.7	6.0	Cerebrovascular disease	386.3	7.0
Accidents	284.8	4.7	Diabetes mellitus	305.7	5.5
Temperate South America					
Heart disease	2.112.1	32.7	Heart disease	609.1	33.3
Malignant tumors	1.267.6	19.6	Malignant tumors	808.2	16.7
Cardiovascular disease	760.6	11.8	Cerebrovascular disease	713.4	14.8
Influenza and pneumonia	210.4	3.3	Influenza and pneumonia	168.8	3.5
Accidents	174.0	2.7	Diabetes mellitus	154.3	3.2

a/ The groups of causes are according to the 8th Revision of the International Classification of Diseases and comprise the following codes: Tuberculosis, 010-019; Malignant tumors, 140-209; Diabetes mellitus, 250; Heart disease, 390-429; Cerebrovascular disease, 430-438; Influenza and pneunonia, 470-474, 480-486; Cirrhosis of liver, 571; Accidents, E800-E949, E980-E989.

Source: Health Conditions in the Americas. Op. cit.

Table 9. Classfication of countries into categories by percentage distribution of deaths from cancer of the cervix and breast with respect to total deaths from malignant tumors, around 1980

Categories	Cervix %	Other parts of uterus %	Cervix and other parts of uterus %	Breast %	Rank order: Cervix	Rank order: Breast
1. Countries with greater proportion of deaths from cancer of cervix*						
Colombia						
35-64 years	14.1	8.7	22.8	9.2	1	3
All ages	10.8	7.4	18.2	6.2	2	4
Costa Rica						
35-64 years	17.5	4.0	21.5	9.3	1	3
All ages	11.0	3.2	14.2	6.6	2	4
Chile						
35-64 years	19.2	2.8	22.0	12.6	1	2
All ages	12.1	2.7	14.8	9.4	2	3
Venezuela						
35-64 years	14.7	14.6	29.3	12.5	1	2
All ages	10.8	12.2	13.0	9.6	2	3
2. Predominance of deaths from breast cancer**						
Argentina						
35-64 years	6.1	8.7	14.8	25.3	3	1
All ages	3.9	7.1	11.0	18.3	6	1
Cuba						
35-64 years	7.3	11.1	18.4	21.3	5	1
All ages	5.3	9.8	15.1	15.4	5	1
Uruguay						
35-64 years	7.0	8.0	15.0	27.0	2	1
All ages	3.9	5.8	9.7	18.5	5	1
3. Similar proportion of breast cancer and cancer of cervix						
English-speaking Caribbean*** (11 countries)						
35-64 years	15.0	5.5	20.5	15.5	1	1
All ages	15.3	6.7	22.0	15.5	2	1

* Countries such as Brazil, Mexico, Panama and Peru are also classfied in this categorv.

** Canada, United States of America and Puerto Rico are also classified in this category.

*** Average data for all the countries.

Source. Most recent data from Statistics Program, PAHO.

Table 10. Potential years of life lost (PYLL)
1-65 years, both sexes - Chile and Uruguay

Cause*	PYLL	Rank order	Percentage
Chile 1980			
Accidents	167,331	1	26.9
Malignant tumors	76,550	2	12.3
Heart disease, hypertension and ischemic heart disease	48,761	3	9.5
All infectious and parasitic diseases	42,663	4	6.8
Cirrhosis of the liver	37,949	5	6.1
Uruguay 1979			
Heart disease, hypertension and ischemic heart disease	31,457	1	22.4
Malignant tumors	30,358	2	21.6
Accidents	26,573	3	18.9
Cerebrovascular disease	7,934	4	5.6
All infectious and parasitic diseases	5,802	5	4.1

* International Classification of Diseases, 9th edition.

Source: Most recent data from Statistics Program, PAHO.

Table 11. Declared handicaps or disabilities (total), by age group

Disabilities	Percentage	Age group of maximum frequency	Percentage of disabled in age group
Total disabled 881	100.00		
By chronic disease	21.91	60 - 74	39.3
Advanced total blindness	13.05	60 - 74	35.6
Mental retardation	11.35	15 - 44	54.0
Advanced total deafness	9.88	75 and over	35.6
Paralysis	9.19	75 and over	35.8
Senility	7.72	75 and over	86.8
Mental disease	7.38	15 - 44	43.0
Malformations	5.79	45 - 59	27.5
Lack of limbs	3.06	45 - 59 and 60 - 74	81.5
Deaf-mute	1.36	45 - 59	33.3
Psychological problems	1.14	5 - 14, 60 and over	90.0
Other	8.17	60 - 74	31.2

Source: Household health survey. Ministry of Public Health, Uruguay. General Report, May 1983.

Table 12. Number of deaths from road traffic accidents, mortality rates from this cause and their percentage variation in selected countries of the Region of the Americas in 1969 and 1980

	No. of deaths		Mortality rates per 100,000 population		
	1969	1980	1969	1980	Variation (percentage)
Argentina	3,524	3,779	14.9	14.3	-4.0
Colombia	3,562*	4,969(b)	17.8	18,9(b)	-6.2
Costa Rica	201	363	12.3	16,6	35.0
Cuba	947	1,212	11.3	12,4	9.7
Chile	1,668	1,434	17.8	13,1	-26.4
Ecuador	837	1.817(a)	14.7	21.8(a)	48.3
El Salvador	296	371	9.1	7.7	-15.4
United States of America	56,400	50,800(b)	28.3	22.2(b)	-21.6
Guatemala	261	1,123	5.5	14.7	167.3
Panama	114	364	8.3	20.0	141.0
Peru	1,336(c)	2,103	10.5(c)	11.8(c)	12.4
Dominican Rep.	286	353	7.1	6.7	-5.6
Trinidad and Tobago	148	230	14.5	19.9	37.3
Uruguay	177	400	6.3	14.0	122.2
Venezuela	2,424	5,211	24.2	37.4	54.5

* Estimate
(a) 1978
(b) 1981
(c) 1967

Source: Health of Adults Program, Accident Prevention Subprogram, PAHO, 1984.

Pan American Health Organization

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TWENTY THIRD MEETING OF THE
ADVISORY COMMITTEE ON HEALTH RESEARCH

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RESEARCH PRIORITIES

HEALTH OF ADULTS PROGRAM

ADULT HEALTH

The Adult Health Program covers disease prevention and control activities and health promotion from the perinatal period through old age.

Its components or subprograms are:

(a) Chronic Diseases (including Cancer);

(b) Mental Health (including Drug and Alcohol Abuse);

(c) Health of the Elderly;

(d) Blindness Prevention;

(e) Accident Prevention;

(f) Services for the Disabled and Rehabilitation.

There has been a dramatic change in environmental factors and personal habits, customs and "life styles", and therefore also in the nature and intensity of the risk factors for particular diseases and conditions among adults and the elderly. The major health problems of this group are chronic and disabling diseases, whose treatment and rehabilitation require more complex levels of specialization with a significant increase in costs for the health and social security services.

Accordingly the Program places special emphasis on prevention (hereditary and congenital diseases, environmental, psychosocial and behavioral factors) and rehabilitation services.

The general purpose of the Adult Health program is to improve the state of health of the adult population and to promote reduction of the incidence and prevalence of the diseases, conditions and disabilities that affect it through an integrated regional program of promotion, prevention, care and rehabilitation. The program operates in collaboration with the Governments in the formulation, execution and evaluation of health policies and programs for the adult and elderly population based on a proper understanding of the social, cultural, economic and political factors which affect this population.

To achieve these objectives, various strategies are employed including periodic monitoring of the health situation, technical support to national programs, the identification of national resources, the promotion of technical cooperation between the countries, the promotion of training and research and the dissemination of technical information. All sub-units of the Program utilize approaches that seek to change harmful life styles and intervene to modify adverse psychosocial factors.

Historical Background

The majority of the components of the Adult Health program are relatively new and the list of past activities in research is necessarily short.

Using models suggested by WHO, PAHO promoted and coordinated a series of collaborative operations research projects during 1974 to 1981. Investigators in various countries who were either working or interested in certain aspects of chronic disease prevention and

control participated. The projects included control of rheumatic fever, arterial hypertension, chronic rheumatic diseases and chronic allergies. The objectives were to gain program experience, demonstrate the feasibility of secondary prevention programs, support existing researchers or groups, facilitate the exchange of experience of common interest and promote and support wider-ranging programs in the different countries. These studies facilitated the collection of epidemiologic data in certain countries, the preparation of technical manuals, and the initiation of a research program on primary prevention of cardiovascular diseases.

Part of the work of promoting research consisted in identifying outstanding institutions and centers. In 1982, a survey of 20 Latin American and Caribbean countries identified 67 institutions devoted to cancer research and treatment.

Until 1984, the Latin American Cancer Research Information Project had identified a total of 696 research projects focusing on both basic and applied research and had reviewed 298 clinical research protocols on cancer. All the projects have been incorporated into the cancer data banks of the United States National Library of Medicine.

Since 1977, PAHO has maintained, in collaboration with the National Cancer Institute of the United States, the Collaborative Cancer Research and Treatment Program to facilitate cooperation between 13 institutions in Latin America and nine in the United States, and enable the countries to improve their research methodology and treatment of neoplasms.

In the field of Mental Health, research in the last ten years has concentrated on study of the epidemiology of mental illness, alcoholism and drug dependence, with special emphasis on urban areas. The program has collaborated with the member countries in designing and conducting surveys on mental illness, alcoholism and drug dependence in six countries and has made a survey of drinking in five countries. Some early stimulation projects have been sponsored which have in their turn generated research projects in the countries concerned and the program has participated in various WHO research projects on the extending of mental health services, the therapeutic effects of psychotropic substances in various cultures and triaxial classification of health problems in the primary level, in which centers belonging to the mental health collaborative network are participating (Brazil, Colombia, Canada, USA).

A survey was made of laws that affect mental health in Latin America and another survey was performed by legislation pertaining to the treatment of alcohol and drug patients.

Over the past five years a number of centers involved in research and training in mental health, neurological sciences and substance abuse have been identified and these now make up a network that currently includes ten institutions.

Investigators in some countries have done research on the health and social condition of persons over 60, covering legal, nutrition and services availability as well as attitudes and beliefs, but the majority of these studies were performed using non-representative samples of the elderly population.

Criteria Used for Setting Priorities

In addition to the minimum requirements to be met by any research as regards feasibility, scientific rigor and ethical safeguards, those in charge of the various components of the Program have agreed to adopt the following priority criteria:

Importance of Problem Studied. Priority will be given to research aimed at solving a health problem of high incidence or prevalence or of special social importance in the adult population of the Region.

Technical Relevance. Projects closely connected with the objectives of the subprograms and with PAHO's policies and plan of action will have high priority.

Applicability. The results expected to be obtained from the research must be suitable for application to large sections of the population, if possible through primary health care. They must also be compatible with the cultural and socio-political situation of the location where they would be applied.

Promotional Effect. In addition to its specific objectives, the proposed study must serve to strengthen and develop national research groups and centers and to foster technical cooperation between member countries.

Diagnostic Value. Special consideration will be given to studies that will help to further understanding of the natural history of diseases, conditions and disabilities that are of greater significance in the Region, including their frequency and distribution and the identification of factors that have a bearing on their origin, course and conclusion.

This criterion is of special importance in the case of chronic noncommunicable diseases, mental disorders, substance abuse and disabilities affected by the life styles of the population.

Technology Development. Priority will be given to research that promotes the development of appropriate technologies for the diagnosis and treatment of and rehabilitation from chronic diseases prevalent in Latin America and the Caribbean.

Despite the fact that the above-listed criteria lean toward application in the developing countries of the Region of scientific knowledge already available, this does not mean that no support is forthcoming for basic research. Such projects are also considered, but only to the degree that there is some possibility that the knowledge they bring can be utilized in the countries' health services.

Priority, Goals and Activities

The following areas are considered to have priority in the various components of the Adult Health program.

- Epidemiologic research, both among the population as a whole and in special groups, in urban and rural areas and low-income districts.
- Studies of psychosocial factors, especially life styles and quality of life, which play a role in the development and course of somatic and mental illnesses, accidents, and disabilities, and on the supply, accessibility and utilization of services.

- Clinical and epidemiologic research on, for example, the nutritional status of the elderly, neurological diseases, vision problems, etc.
- Determination of indicators (for diagnosis, evaluation, risk, etc.)
- Development of technologies for use in diagnosis, treatment and rehabilitation that can be applied in Latin America and the Caribbean. (Examples are production of prostheses, diagnostic means applicable in the primary level, manuals and other teaching tools, etc.).
- Operations research: accessibility, utilization, efficiency and efficacy of services.
- Research on evaluation of technologies.

Current Activities

- Project MORE, which is compiling data on the magnitude and characteristics of certain noncommunicable chronic diseases in the countries of the Region.
- A household health survey concerning chronic diseases. A socio-epidemiologic and operations research study of social and health conditions and utilization of services by the adult population in Uruguay.
- A feasibility study for the implementation of integrated prevention and control programs for chronic diseases in Brazil and Cuba.
- A cooperative study on the incidence of cancer of the gall bladder in Bolivia, Mexico and the United States.

- Compilation and dissemination of information on cancer, serving all the countries of the Region, through the Latin American Cancer Research Information Project.
- Collaborative Research Program on Cancer Treatment. A multinational clinical trial project involving 22 institutions in the Region.
- Neuroepidemiologic research in Mexico, Venezuela, Ecuador, Peru, Bolivia and Chile.
- A study of social support systems in a low-income district of Mexico City.
- Household surveys of the use of psychoactive drugs in Colombia and Peru.
- A survey of the needs, perceptions and attitudes of the population aged 60 and over in urban centers of 11 countries of the Region, the findings of which will be used in the development of programs.
- Field test of a manual for community-based rehabilitation in Argentina, Mexico and St. Lucia.