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BLINDNESS PREVENTION IN THE AMERICAS

In 1979 the XXVI Meeting of the Directing Council of the Pan American Health Organization (PAHO), passed Resolution CD26.R13 which requested the Director to give all possible support to the Governments for the development of programs for the prevention of blindness and in all aspects of the problems which caused visual impairment. As a result, PAHO created a Regional Advisory Group to advise on the direction and scope of a regional program and sought extrabudgetary funds to implement a series of direct actions to assist the Member Countries in their programs on the prevention of blindness.

Since 1980, with the strong support of several nongovernmental organizations (NGOs), national specialists and government authorities, PAHO has gradually developed a Regional Program for Eye Care based on primary health care. The Program has fostered regional and national activities mainly related to the mobilization of resources, training of personnel, epidemiologic research, direct technical cooperation and development of norms, plans and policies, and encouragement and support of the implementation of national programs in 12 Latin American and English-speaking Caribbean countries.

Those direct activities of the Regional Program have been in addition to several other actions for eye health and the prevention of blindness, such as those related to maternal and child health (improvement of perinatal care, application of the method of Credé to the newborn, immunizations), food and nutrition (promotion of intake of vitamin A), environmental health (water supply and sewerage, health of workers), and control of communicable diseases (trachoma, leprosy and onchocerciasis).

Examination of various data sources has shown that senile cataract, eye injuries, glaucoma, diabetic retinopathy and the low coverage of health services are the main eye health problems in the Region.

The eye care activities which are currently being carried out are described and a Regional Plan of Action is proposed to address these problems. The Plan sets out the activities to be developed at the national level, indicates the Regional and intercountry support which should be applied, and describes the practices to be followed for monitoring and evaluation.

The Executive Committee is asked to review the activities of the PAHO program and comment on its future directions, particularly on the cooperative relationship which must be developed with NGOs.

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BLINDNESS PREVENTION IN THE AMERICAS

1. BACKGROUND

1.1 National Perspective

Eye damage and blindness have often been considered public health problems in Latin America and the Caribbean, but few countries established specific eye care programs of national scope prior to 1980.

Direct prevention activities aimed at maintaining ocular health at the level of the basic services have been minimal; nevertheless, some indirect actions have been taken. Most countries promote the prevention of ophthalmia neonatorum (neonatal conjunctivitis) through the application of 1% silver nitrate to the eyes of the newborn (method of Credé), the prevention of xerophthalmia through the promotion of an adequate intake of vitamin A and the treatment of diarrhea and intestinal parasites which are causes of poor intestinal absorption of vitamin A.

Screening for eye disorders and visual loss has not been a routine procedure at the peripheral level; there is no early detection of eye diseases and patients are often identified and referred to the higher levels of the health system when the disorders are already serious. Curative activities for potentially blinding disorders at the basic health services level have been very limited.

The generally accepted idea has been that eye care should be given by ophthalmologists in specialized clinics, an approach which ignores the importance of primary health care.

There are about 20,000 ophthalmologists in the Region of the Americas but the majority of these specialists are concentrated in major urban centers. The coverage of rural areas by general health services is still far from adequate, and a high proportion of the predominantly poor population has no access to appropriate eye care.

1.2 Activities of the Pan American Health Organization

Before 1979, the Governing Bodies of the Pan American Health Organization passed several resolutions and supported national actions which, although not directed to the prevention of blindness, contributed to a decrease in eye damage and blindness. Some of the resolutions were related to the control of diabetes mellitus, accident prevention, malnutrition, communicable and noncommunicable diseases, environmental health, and maternal and child health.

In 1979 the XXVI Meeting of the Directing Council of the Pan American Health Organization passed Resolution CD26.R13, which resolved:

1. To request the Director of the Pan American Sanitary Bureau to give all possible support to the Governments and to properly accredited nongovernmental organizations in the promotion of research, training programs, and the formulation of national and regional plans for the prevention of blindness, and in all aspects of visual impairment problems.

2. To request the Director to establish a Regional Advisory Group on the Prevention of Blindness to assist in the planning, execution, and evaluation of the program.

3. To strengthen technical cooperation for the development of regional blindness prevention programs.

4. To authorize the Director to obtain extrabudgetary funds for the implementation of this resolution by calling, where necessary, on the Governments and on nongovernmental organizations, and to invest the funds so obtained in blindness prevention programs.

The Declaration of Alma Ata (1978) adopted by the World Health Assembly in 1979 stated that primary health care (PHC), based on appropriate technology, with full participation of individuals and the community, is the key for attaining the target of health for all by the year 2000. That Declaration called on all governments to launch and sustain primary health care as a part of a comprehensive national system coordinated with other sectors. PAHO has always considered that eye care should be incorporated into primary health care.

In compliance with the Resolution CD26.R13, PAHO in 1980 convened in Belo Horizonte, Brazil, the first meeting of the Advisory Group which has provided guidelines for the development of a Regional Program over the past ten years. PAHO initiated a series of activities and projects aimed at strengthening eye care all over the Region, and in 1984 those activities were reinforced with extrabudgetary funds for the appointment of a full time public health ophthalmologist to coordinate the program.

There has also been identification of collaborating centers, establishment of relationships with a range of NGOs, and vigorous promotion of eye care as a part of primary health care at the national level.

1.3 The Problem

Analysis of available data in 1984 provided a gross estimate of between 1.5 and 2.5 million blind persons in the Region of the Americas. The first difficulty in assessing the problem of eye care and blindness in this Region, as in other parts of the world, was the multiplicity of definitions used by different countries. The categories of blindness recommended by WHO (International Classification of Diseases, Ninth Revision) have been gradually accepted, and it is becoming easier to collect data which can be analyzed on a regional basis.

The second major difficulty was that because of the low coverage of general health services in developing areas, there has been lack of data about loss of vision, ocular disease and eye care.

Despite the above mentioned difficulties, on the basis of population based surveys, hospital records, epidemiologic research and contributions made by ophthalmological societies and by the Pan American Association of Ophthalmology, it has been possible to make an approximation of the problem as a whole and to identify the most prevalent eye disorders.

All the research carried out in the Region, as well as the information gleaned from the ministries of health and the social security systems has shown that senile cataract is the leading cause of curable blindness, refractive errors are the main cause of visual loss and eye trauma is the first cause of ophthlamic consultancy. Open angle glaucoma and diabetic retinopathy are other important causes of eye damage and blindness. Low coverage of health services constitutes the major constraint to adequate eye care.

Some of the blinding disorders which are common in other parts of the world such as trachoma, onchocerciasis and xerophthalmia are limited to small geographical areas in the Americas. Onchocerciasis, for example, is found only in small areas of Mexico, Guatemala and Ecuador.

Aging is the most common cause of cataract. Fortunately, cataract, although the leading cause of blindness, is also the most curable cause. The National Eye Institute/National Institutes of Health (USA) has established that about 50% of the population over 50 years of age show some signs of cataract, and many of them are visually impaired by this disorder. Diabetes mellitus is a secondary factor which increases the incidence of this problem. Changes in demographics together with changes in lifestyles will probably cause an increase of senile cataract.

Refractive errors are present in more than 15% of the general population and about 80% of the elderly. They are the most common cause of visual loss, but are treatable by the use of spectacles, which, although they are among the cheapest tools produced by modern technology, are out of reach of many of the Region's poor.

Eye trauma is a major cause of blindness in many of the countries; it is linked to industrialization with its attendant accidents, agricultural practices, motor vehicle accidents and violence.

Open angle glaucoma and diabetic retinopathy are also closely related to aging and lifestyles.

The already low coverage of eye care is diminishing steadily as more and more people come to need the services. The children, the poor and the

elderly, those who need spectacles and cataract surgery, are being increasingly deprived of the vision they need to enjoy a life of good quality.

1.4 Ongoing Activities in Eye Care

1.4.1 Country Level

Five Latin American countries (Brazil, Costa Rica, Cuba, Guatemala and Peru) have implemented national programs and nine others (Belize, Bolivia, Colombia, El Salvador, Guyana, Haiti, Honduras, Nicaragua and Paraguay) are starting with the support of PAHO and AGFUND (the Arab Gulf Fund for United Nations Development Organizations). The English-speaking Caribbean countries have organized themselves as a group through the "Inter-Agency Coordinating Group for Eye Care in the Caribbean" and have all put in place national programs for eye care.

1.4.2 Regional Level

PAHO has pursued three different lines of action:

a) The PAHO Advisory Group for the Prevention of Blindness has held four meetings since 1980 and produced basic guiding documents for the technical and administrative development of the Regional Program. Additionally, PAHO has organized subregional meetings (Southern Cone, Caribbean countries) and working groups (Consultation Meeting with a group of ophthalmologists, Washington, D.C.; Standardization Meeting with a group of managers of national programs, Costa Rica) for the production of technical documents and guidelines.

b) "Indirect" activities have been carried out by other PAHO programs. It is important to underline those activities related to maternal and child health such as the improvement of perinatal care, the application of the Method of Credé to the newborn, and immunizations; food and nutrition (promotion of a good intake of Vitamin A), environmental health (water supply and sewerage, health of the workers), communicable disease control (trachoma, leprosy, onchocerciasis, intestinal parasites, sexually transmitted diseases), noncommunicable disease control (diabetes mellitus, hypertension), prevention of accidents and health of the elderly, as well as those activities directed to the improvement of the capacity of health services, the organization of local systems of health care, and the publication of training materials through the Pan American Health and Education Foundation (PAHEF).

c) The PAHO Regional Program for the Prevention of Blindness, in the Health of the Adult Program, has carried out a series of "direct" activities which are described below.

2. PAHO REGIONAL PROGRAM FOR THE PREVENTION OF BLINDNESS

2.1 General Aspects

Beginning in 1982, the Regional Program for the Prevention of Blindnessis a component of PAHO's Health of the Adult Program. It has had a Regional Adviser (1985-1987) and a Regional Consultant (1987-88) as regular staff. The Global Program (WHO/Geneva) and six Collaborating Centers: National Eye Institute/National Institutes of Health (USA), Dana Center/Wilmer Institute at the Johns Hopkins University (USA), Francis I. Proctor at the University of California (USA), Instituto Nacional pro Ciegos y Sordomudos (Guatemala), Hospital Santo Toribio de Mogrovejo, presently the Instituto Nacional de Oftalmología (Peru) and Servicio de Oftalmología Sanitaria de la Secretaría de Salud (Sao Paulo, Brazil), have provided strong support.

2.2 Objectives

2.2.1 General Objective

To strengthen and expand eye care programs in Latin America and the Caribbean which will reduce the incidence of preventable blindness and attend to the priority ocular and visual problems in the Region, with special emphasis on those activities which may be carried out through the primary health care approach in the local systems of health care.

2.2.2 Specific Objectives

- To cooperate with Member Countries in assessing blindness in individual communities in order to concentrate preventive and restorative activities in those areas which have blindness rates of 0.5% or more.

- To cooperate with Member Countries in establishing appropriate governmental programs for preventing avoidable blindness particularly from cataract, trauma, glaucoma and diabetic retinopathy, as well as visual loss due to refractive errors easily corrected by spectacles. Such programs must include the restoration of sight to the curable blind and the provision of eye care as a part of primary health care.

- To assist countries to carry out the research necessary to determine the appropriate mechanisms for strengthening the eye care services, and to deal with the most important aspects of eye care.

2.3 Strategies

The following general approaches have been applied in implementing the Regional Program:

2.3.1 Resource Mobilization

The Regional Program has aimed at reinforcing the activities already underway and at extending the program to other countries. This has necessitated the mobilization of a wide range of resources both nationally and internationally, with the support of nongovernmental organizations and private groups active in this field. Special financial support has been given by Chibret International (USA). In addition, PAHO has established contact and worked with the other influential NGO's in this field. These include: the International Agency for the Prevention of Blindness (IAPB), Helen Keller International (USA), Royal Commonwealth Society for the Blind (UK), Operation Eyesight Universal (Canada), International Eye Foundation (USA), and AGFUND.

The Pan American Association of Ophthalmology (PAAO) is constituted by almost all the ophthalmologists of the Americas, and is the most important technical resource for supporting primary eye care at the national local level.

The national institutions have been mobilized to form national/local committees for the prevention of blindness and to contribute through their expertise in the fields of information, training, research, interactive community organization and participation, and fund raising.

2.3.2 Dissemination of Information

Bibliographic materials and WHO documents have been widely disseminated among programs as well as professional groups. A special publication on four priority problems (cataract, glaucoma, trauma and diabetic retinopathy) has been prepared for distribution in Latin America and the Caribbean.

2.3.3 Training

Although training is a responsibility of national programs, PAHO has provided technical cooperation through the production and dissemination of filmstrips, audiovisual aids and manuals (Manual of Primary Eye Care, Manual de Atención Ocular Primaria, Manual de Oftalmoscopía y Tonometría, Oftalmología Aplicada para el Médico General y el Estudiante de Medicina), as well as through training courses both in primary eye care and management of national programs.

It is necessary to foster this strategy, mainly by the production and/or distribution of basic material and equipment for training in primary eye care, and by emphasizing the training of primary health care personnel in eye care.

2.3.4 Development of Norms, Plans and Policies

PAHO's Regional Program has actively supported Member Governments in the development of norms and national plans, and design of

comprehensive and specific policies. The support of AGFUND for a group of selected countries has played an important catalytic role in the definition of national plans.

2.3.5 Research

The Regional Program has provided technical advice at the planning and implementation stages of epidemiological research in Bolivia, Brazil, Chile, Guatemala, Peru and some of the Caribbean Islands, as well as for health (eye) care services research in Colombia and Costa Rica. It is necessary to reinforce operational research mainly directed to cataract, glaucoma, trauma and low-cost spectacles supply, and to the strengthening of eye care services.

2.3.6 Direct Technical Cooperation

PAHO's Regional Program on Eye Care has provided direct technical cooperation to Member Countries through short-term consultants, the Regional Adviser and regular staff.

PAHO produced the "Guidelines for the Evaluation of Eye Health Care Services, which has been used as a current standard since 1986.

PAHO will build on the current strategies and activities, and the expanded functions which it will seek to carry out are set out below in the Regional Plan of Action. The majority of the actions proposed will depend on obtaining extrabudgetary funds and mobilizing and coordinating national and international resources.

3. REGIONAL PLAN OF ACTION

Given the level of resources that have been available for eye health and the prevention of blindness, PAHO can continue the level of activities described in Section 2. However, in order to amplify the current strategies and activities and expand the scope of the regional efforts according to the following plan of action, it will be necessary to mobilize additional extrabudgetary resources, obtain the political commitment of the Member Governments and promote the coordination of the application of the national and international resources being applied in this field.

This expanded Plan of Action comprises the following groups of activities:

- Those directed to the development of national activities;

- Those focused on the development of intercountry and regional support mechanisms;

- Those designed for the monitoring and evaluation of the Program, including this Plan of Action.

3.1 Activities at the National Level

The Regional Program will focus its attention on cooperating with Member Countries in two broad areas which are obviously not mutually exclusive:

- Activities to deal with the priority causes of blindness;

- Activities to promote health services development.

3.1.1 Priority Causes of Blindness

Activities

- Establish information systems within the countries' own information systems to permit the collection of data to be used for planning eye care services;

- Produce standard norms and procedures in manuals for eye examination and establish criteria for case referral;

- Train health workers to detect visual loss;

- Complete the planning and programming stages for the development of those aspects of the health care services which deal with senile cataracts and eye trauma;

- Disseminate information on the priority causes of blindness needed for national activities;

- Collaborate with other program areas when necessary to stimulate the reduction of risk factors, e.g. treatment of diabetes mellitus;

- Promote intersectoral coordination with agriculture, labor and education sectors so that preventive measures can be developed and used to reduce eye trauma.

Although priority attention will be given to cataract and eye trauma, PAHO will collaborate on request with member countries in specific activities related to the prevention and management of glaucoma, onchocerciasis, trachoma and xerophthalmia.

3.1.2 Health Services Development

Activities

- Collaborate with NGOs active in eye care in national, subregional and regional activities designed to strengthen

health services development in general and eye care services in particular;

- Collaborate with national training institutions to ensure that the primary care approach to eye care is fully expressed in their curricula;

- Further develop and apply the methodologies and instruments for evaluating the efficiency of eye care services;

- Promote national programs for the provision of low cost spectacles both for correcting refractive errors and for post cataract surgery.

3.2 Regional and Intercountry Support

The activities of the Plan of Action described above will be supported by PAHO through provision of technical cooperation to the Member Countries. The strategies to be followed are essentially the same as those currently in practice and which have been described above. They are repeated and some specific additional emphases given.

3.2.1 Resource Mobilization

PAHO will continue to seek to mobilize financial resources to assist member countries. It will continue to convene the Regional Advisory Group at appropriate intervals. Special attention will be paid to the role of the NGO's and efforts will be made to achieve coordination of activities at the national level. Subregional activities will be promoted and every effort made to stimulate technical cooperation between countries.

The linkages and coordination will be strengthened with those programs which carry out "indirect" activities which relate to eye care but which are not directly under the purview of the Regional Program and which have not been included in the Plan of Action.

3.2.2 Dissemination of Information

PAHO will continue to disseminate ophthalmic and public health information to the Member Countries. If the appropriate funds are identified, it will be possible to start the selective dissemination of information by means of a quarterly bulletin on eye health, including the summaries of the most important publications related to the identified priorities: cataract, eye trauma, low-cost spectacles and health services development, glaucoma and diabetic retinopathy and short comments on progress of national programs. The dissemination of information will be directed basically to public health workers, epidemiologists and to the health services workers at the operational level.

3.2.3 Training

The training of personnel will be directed primarily to the national trainers of health workers at the primary level of care. It will also be necessary to include epidemiology and management training for eye care and prevention of blindness programs.

3.2.4 Development of Norms, Plans and Policies

The direct technical cooperation will allow countries to develop the necessary standards, legislation, plans and evaluation tools which should ensure the success of the national local programs in obtaining the expected impact on the population's eye health.

3.2.5 Research

The establishment of a Regional data bank related to cataract, eye trauma, low-cost spectacles and development of health (eye) care services, as well as the development of national programs, will permit the implementation of operations research projects which will be complemented with epidemiologic research about those identified priorities.

3.2.6 Direct Technical Cooperation

Direct technical cooperation will be offered to the countries through a Regional Adviser, short-term consultants and other contracted personnel. The support will be for the planning, programming, and implementation of national programs.

3.3 Monitoring and Evaluation

The monitoring of the Regional Plan of Action will be carried out essentially by the normal mechanisms used by PAHO to monitor its technical cooperation with Member Countries and will include the following:

- Annual internal evaluation within PAHO of the execution of the activities which have been programmed;
- Annual internal evaluation within PAHO of the impact which the Regional program has had at the national level. The impact will be assessed qualitatively and to a lesser extent quantitatively by the effect of the activities on the level of development of the national programs and also on the change in the eye health of the population;
- At the end of three and five years, comprehensive evaluation by PAHO and the collaborating organizations of the changes which have occurred in eye care in the Region of the Americas.

Suitable instruments and indicators will be developed or existing ones modified to permit the evaluations.

The meetings of the Regional Advisory Group and the subregional meetings will also provide fora in which the activities set out in the Plan of Action can be assessed.