PAN AMERICAN HEALTH ORGANIZATION

EXECUTIVE COMMITTEE OF THE DIRECTING COUNCIL

27th MEETING OF THE SUBCOMMITTEE ON PLANNING AND PROGRAMMING

Washington, D.C., 4-6 December 1996

Provisional Agenda Item 7

SPP27/6 (Eng.)
29 October 1996
ORIGINAL: ENGLISH

ORAL HEALTH

Oral health continues to be a critical aspect of general health conditions in Latin America and the Caribbean because of its weight in the global burden of disease, its associated treatment costs, and the potential for effective prevention. Dental caries is the most common disease among children in the Region of the Americas; approximately 90% of school-age children (5-17 years) are affected. However, with early intervention, dental caries can be either prevented or treated at a reduced cost.

A variety of systemic conditions and/or their sequelae, such as diabetes and oral and pharyngeal cancer, produce manifestations in the form of dental caries, periodontal conditions, and tooth loss. Of emerging importance are HIV/AIDS and hepatitis B; besides the clinical effect, they are important for transmission in the dental care setting.

This document sets forth innovative concepts for the allocation and management of oral health resources. The groundwork for water and salt fluoridation programs has been laid by PAHO. Largely as a result of PAHO's initiatives and leadership, a number of conditions now exist which enable the success of water and salt fluoridation in the Region of the Americas. First, many countries (Chile, Colombia, Costa Rica, Jamaica, Mexico, Peru, and Uruguay) which formerly had limited capacity to implement water and salt fluoridation programs have benefited from PAHO's technical cooperation and support. Currently, these countries have mature policies, sufficient infrastructure, and programmatic capabilities that allow their programs to be consolidated, so that effectiveness in caries reduction and sustainability of the programs are predominant. Second, PAHO and these countries have accumulated a significant level of expertise and technical experience which can be transferred to other countries. Third, underpinning these developments, there is now an emerging recognition that the most promising strategy for improving the oral health of millions in the Region resides in water and salt fluoridation, the key factor in changing the epidemiological profile of oral health for the Region of the Americas in a relatively short period of time. It is expected that most countries in the Region will have reached the WHO goal of a DMFT-12 (decayed/missing/filled teeth for 12-year-old children) of 3 by the year 2000.

The Subcommittee on Planning and Programming is requested to comment on the proposed strategies aimed at supporting government efforts to improve the effectiveness and efficiency of oral health preventive programs and to strengthen the organization and delivery of oral health services in the Region.

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1. Background

1.1 *Oral Health Situation in the Region*

Comprehensive data on oral health in the Region are scarce; however, there are some data that allow an overall evaluation of the current status and recent trends, especially in dental caries and needs for periodontal treatment.

1.1.1 *Caries Prevalence*

Dental caries is the most common disease among children in the Region; approximately 90% of school-age children (5-17 years) are affected. It is a progressive, infectious disease, which if left unattended may result in tooth loss. Unless timely restorative treatment is provided, the carious lesion will continue to destroy the tooth, eventually resulting in pain, acute infection, and costly treatment. However, with early intervention dental caries can either be prevented or treated at a reduced cost. Annex A shows DMFT-12 (decayed/missing/filled teeth index for 12-year-old children) data for selected countries in the Region. Overall, there is a wide range of dental caries prevalence in the Region, from 1.08 to 8.3, with a mean of about 4.4.

1.1.2 *HIV/AIDS and Hepatitis B*

Infections by the human immunodeficiency virus (HIV) and its associated acquired immunodeficiency syndrome (AIDS) are worldwide epidemics of serious public health concern. As of mid-1993 an estimated 1.5 million adult HIV infections had been reported in the Region, resulting in about 250,000 AIDS cases. The oral manifestations of HIV infection include oral mycosis, leukoplakia, gingivitis, periodontal diseases, and Kaposi's sarcoma. Many HIV-seropositive persons experience very aggressive forms of destructive periodontal diseases, which can significantly compromise their nutritional status and may require hospitalization. These conditions are important oral health concerns in countries with high HIV/AIDS prevalence. Routine dental examinations can play an important role in the initial diagnosis of HIV infection and in the management of AIDS. In some instances, oral manifestations associated with HIV infection may be an initial clinical presentation of AIDS. Dental professionals should be able to make such diagnoses and refer persons for appropriate medical evaluation.

Current data suggest that the risk for transmission of HIV and hepatitis B virus (HBV) in the oral health-care setting from a health-care worker to a patient during an invasive procedure is small; a precise assessment of the risk is not yet available. International recommendations have been made for the prevention of transmission of the hepatitis B virus in health-care settings and in infection-control programs, to provide guidance for prevention of HIV and HBV transmission during those invasive procedures

that are considered exposure-prone. Proper application of these principles will assist in minimizing the risk of transmission.

1.1.3 *Oral and Pharyngeal Cancer*

Oral and pharyngeal cancers pose a special challenge to oral health programs, considering that they are both preventable and lethal. Although these cancers are considered rare, they are more common than leukemia, skin melanoma, and other gonadal cancers. Use of tobacco products, including smokeless tobacco, and excessive alcohol use are associated with more than 70% of cancer lesions. The combined use of tobacco and alcohol has a synergistic effect. Oral and pharyngeal cancers account for about 4% of total cancer cases, resulting in a mortality rate of approximately 3% in the Region. Almost half of all patients die within five years after diagnosis, depending on the site of the primary tumor. Poor survival rates can be attributed to delayed detection and treatment.

1.2 *Organization and Delivery of Oral Health Services*

1.2.1 *Supply Factors*

Countries are severely limited in their ability to collect and analyze relevant oral health data for planning or evaluation purposes. Disenfranchised populations, including those with low incomes and poor education or who are geographically isolated, suffer from more prevalent and severe oral diseases as well as delayed care, if any. The inequities associated with this differential distribution ought to be addressed in the design of national preventive programs. Finally, the advent of new diseases, such as HIV/AIDS, has prompted the dental profession and the consumers of dental services to rethink behaviors aimed at infection control and standards for interactions necessarily attendant to care delivery. Resources for delivery of oral health care services are limited, and curative care is restricted to those with the ability to pay or those with access to social insurance schemes.

Currently, the Region has over 400,000 dentists, with an average of 3.1 per 10,000 population. The actual number of dentists per 10,000 population ranges between 0.2 to 10.5. Most dentists in the Region establish private practices in urban areas; as a result, there are large underserved areas. In the Region, there are 202 schools of dentistry, 65% of which are located in Brazil and Mexico. Dental school curricula emphasize curative interventions, and very little is offered on public health dentistry. Training is mostly geared to producing professionals for private practice. The result is a paucity of organized preventive programs in the Region, despite their proven effectiveness and serious deficits in oral health service coverage.

1.2.2 *Demand factors*

Dental care services in the Region, whether public or private, are provided in response to potential users' attitudes or perceptions, as well as their purchasing power, particularly in the market for private services. Most countries have no information about or mechanisms to organize and rationalize demand for dental care—or health care, for that matter. In part, this is why dental care may only be available in certain areas of a country, benefiting selected population groups. When examining demand factors, data on population characteristics such as demographics, educational level, and socioeconomic level (place of residence, family income, occupation) and on dental care service delivery characteristics (health care financing, availability of insurance) should be studied. The purpose is to determine: (a) whether some or all of the factors described exist in any one country; (b) what are the possible implications of demand on oral health status and service delivery; (c) what is the regional demand pattern; and (d) what are the potential strategic implications for the development and/or consolidation of organized, rationalized, and sustainable oral health delivery systems in the Region.

2. PAHO's Regional Strategy for Oral Health

The Ninth General Program of Work of WHO establishes the global health policy framework for action of the world health community and the program framework for WHO's own work in the light of global health policy, in support to countries in improving health and health systems with particular emphasis on countries in greater need. The WHO Oral Health Program and its global oral health strategy recognize oral health as an integral component of the primary health care approach. In the Region of the Americas, PAHO supports oral health plans based on measurable goals, to be attained largely through the implementation of preventive methods and by supporting governments' efforts to strengthen their own oral health care systems. The policy orientation in the Program identifies the priorities for its own work and the types of product that should be delivered during the three biennial program budgets.

The WHO Program states: "The emphasis of both the global policy framework and the WHO program framework is on support to countries in improving health and health systems, with particular emphasis on countries in greatest need." Furthermore, under priorities for WHO's work in preventing and controlling specific health problems, WHO says: "Another example is the 80% reduction in dental caries through optimal use of fluorides."

The goals and targets of the Ninth General Program of Work and PAHO's strategic and programmatic orientations, 1995-1998, are the reference point for the objectives and strategies proposed in this document.

In line with the above, two objectives have been set forth:

- To promote improvement of oral health conditions in the countries of the Americas, with emphasis on those with a greater burden of disease.

- To assist countries to develop accessible, effective, and sustainable oral health services.

A regional framework that allows for recognition of individual country problems makes it possible to develop targeted strategies. The strategies presented in the following section are based on an oral health development typology that classifies countries in the Region according to their oral health development.

The first step in establishing a strategy is to adopt a typology that identifies variables relevant to a country classification. A first approximation, based on available data and a framework, indicates that the DMFT-12 and the presence of national preventive policies such as water or salt fluoridation programs may be the most important factors in grouping countries along an oral health development continuum.

The DMFT-12 is selected as one of the criteria due to its ease of measurement and accessibility in most countries of the Region. This indicator allows for cross-country comparisons which are valid and reliable. The presence or absence of national water or salt fluoridation programs is the second criterion because of the programs' effectiveness, coverage, and low cost.

Having established these two criteria, three stages of oral health development can be defined. First, emerging, defined as DMFT-12 greater than 5 and with absence of a national fluoridation program; second, growth, defined by a DMFT-12 of 3 to 5 with a national fluoridation program in progress; and third, consolidation, defined by a DMFT-12 lower than 3 and the presence of a national fluoridation program.

Based on the above criteria, a strategy-oriented typology has been structured (see table below). This table attempts to group countries along an oral health status development continuum. Using the criteria described, 14 of 30 countries are grouped in the growth category. However, it is clear that countries in this category are rather heterogeneous and may have different potential for supporting oral health activities.

The overall oral health strategy for the 1990s and beyond proposed by PAHO will drive countries along the development continuum, from the emerging category to the consolidation category. In other words, PAHO's strategy will be to develop a series of activities aimed at moving countries with high levels of disease and lacking appropriate preventive policies towards achieving improved status indicators and policies.

TYPOLOGY TABLE

Emergent DMFT > 5	Growth DMFT 3-5	Consolidation DMFT < 3
Belize, Dominican Republic, El Salvador, Guatemala, Haiti, Honduras, Nicaragua, Paraguay, Peru	Argentina, Bolivia, Chile, Colombia, Costa Rica, Ecuador, Mexico, Panama, Puerto Rico, Suriname, Trinidad and Tobago, Uruguay, Venezuela	Bahamas, Bermuda, Canada, Cuba, Dominica, Guyana, Jamaica, United States of America

3. Implementing the Oral Health Strategy

This section describes specific short- and medium-term activities. The following strategies should serve as guidelines for the planning and implementation of oral health activities at the regional level as well as at the country level over the next biennium.

3.1 *National Preventive Oral Health Programs*

3.1.1 *PAHO's Multi-Year Plan for Water and Salt Fluoridation Programs*

Fluoridation of the Region of the Americas by Year 2000. In 1994, PAHO launched a multi-year plan to support the implementation of water and salt fluoridation programs. The operating principles for this regional plan include prevention, capacity building, and sustainability. Since then, through new programs in Bolivia, Chile, and Ecuador and programs in progress in Dominican Republic, Honduras, Nicaragua, and Panama, and in already existing ones in Argentina, Brazil, Colombia, Costa Rica, Jamaica, Mexico, Peru, and Uruguay, an estimated 180 million individuals are covered by fluoridation programs. It is projected that more than 250 million individuals will have access to fluoridated water or salt by year 2000.

Programmatically, in order to implement salt or water fluoridation programs, PAHO has proposed three stages of implementation: feasibility assessment, short-term evaluation, and long-term evaluation (Annex B). Details of PAHO's activities in support of water and salt fluoridation programs are available in *PAHO's Oral Health Report for 1996* (Annex C).

Effectiveness of Salt Fluoridation. In Europe, the advantages of salt fluoridation have been acknowledged in the effective conduct of a mass dental caries prevention

policy for 30 years. There is clear scientific evidence of a statistically significant reduction in caries. In Jamaica, caries reduction was 85% after eight years of program implementation. In 1987, Jamaica initiated a comprehensive salt fluoridation program. In 1995, a survey of Jamaican children was conducted to determine the effectiveness and risk of salt fluoridation. Dental examinations of 1,200 children ages 6 to 8, 12, and 15 showed a mean DMFT prevalence for 12-year-olds of 1.08, compared with the corresponding score of 6.7 DMFT for children of the same age at the baseline examinations in 1984. The mean percentage of sound permanent teeth in all age groups was 95; 61% of the children had caries-free permanent teeth. In Costa Rica, caries reduction was 40% after five years of program implementation, a clear indicator of salt fluoridation's effectiveness.

Cost of Salt Fluoridation. Salt fluoridation is as effective as and less costly than water fluoridation. Anticipated cost-benefit analyses conducted by PAHO in various countries have revealed that, even under conservative estimates (dental services coverage to approximately 25% of the population at an average of US$ 3 per dental appointment), the cost-benefit ratio approximates 1:41. This means that for every dollar invested in salt fluoridation programs, the country will save $41 dollars in curative dental care that would not be necessary. Under more realistic circumstances (expanding coverage to 50% of the population and at an estimate of $10 per dental appointment), the potential savings are $136 for each dollar invested in the program.

In terms of cost, it has been estimated that, even for a country with 25 fluoridation plants, the investment corresponds to about $0.50 per person for the six years of the program. This investment would cover costs of planning, execution, monitoring, evaluation, and social communication.

Short-term Goals (1-2 Years)

- Initiate feasibility (cost-benefit) and baseline assessments for national salt and water fluoridation programs in six countries: Argentina, Dominican Republic, Honduras, Nicaragua, Panama, and Paraguay.

- Support development of country capability to implement effective epidemiological surveillance systems in all current national programs.

- Support development of oral health education and school program materials that are curriculum based so that school teachers can teach oral health while teaching curriculum areas.

Medium-term Goals (3-4 Years)

- Continue feasibility and baseline assessments for additional national fluoridation programs.

- Support establishment of sustainable fluoridation programs in all countries.

- Reinforce country capability to carry out appropriate epidemiological surveillance systems.

- Reinforce oral health education and school program materials.

3.1.2 *Oral Health Policy Development in Information, Education, and Communication Programs to Address the Burden of Oral Diseases, including Oral Pharyngeal Cancer and HIV/AIDS*

The purpose of this strategy is to support information, education, and communication (IEC) programs aimed at improving or encouraging decision-making, community awareness, and behavioral changes to prevent caries, periodontal diseases, HIV/AIDS and related oral conditions, and oral pharyngeal cancer. These are the most critical oral conditions in terms of the burden of disease in the Region. As mentioned in the background section, most of these conditions are associated with specific risk factors, such as poor oral hygiene, inadequate diet, low socioeconomic status, limited education, and pernicious behaviors such as smoking or drug abuse. Because of the complex nature of these risk factors, preventive programs also require a multidisciplinary, intersectoral approach. An IEC program has the potential to recognize key aspects related to the incidence of selected risk factors, and to design educational and communications actions to alter those risk factors.

Short-term Goals

- Promote the introduction of country policies for IEC activities for oral health in the public sector.

- Develop universal precautions guidelines appropriate for the dental community and the Region.

- Carry out regional conferences on prevention of HIV/AIDS, hepatitis B, and oral pharyngeal cancer with dental schools, ministers of health, and national AIDS programs.

Medium-term Goals

- IEC policies and programs to prevent HIV/AIDS and hepatitis B in place and operating in every country in the Region.

- Guidelines on universal precautions distributed throughout the Region.

- Prevention of oral pharyngeal cancer, HIV/AIDS, and hepatitis B included in the curricula of all dental schools in the Region.

3.2 *Improving the Efficiency, Effectiveness, and Equity of Oral Health Systems in the Public Sector and Key Aspects of System Performance that Will in Turn Lead to Better Oral Health*

The purpose of this strategy is to strengthen sustainable integration of oral health services in the public sector and assist ministries of health to build the capacity of their oral health programs, an important step under the current vision of health sector reform.

Technical cooperation will be directed toward assisting countries to organize supply and demand for health care services, including comprehensive dental care, at the local level. An effective approach should make possible increased oral health coverage, a priority focus on prevention, and development of efficient and effective models for service delivery.

Short-term Goals

- Support of the development of oral health services in the countries, to improve coverage and quality of oral health. Services should be based on priorities, urgency, and potential for referral.

- Support of the use of atraumatic restorative treatment using glass ionomer cements, a new but inexpensive and accessible technology.

- Analysis of demand for dental services, payment patterns, and national-level expenditure estimates, with case studies in three countries.

- Identification of country priorities and beginning work on expanded coverage of dental services through social financing (Argentina, Chile).

- Identification of country priorities and beginning work to expand coverage through organized plans (Bolivia, Colombia, Ecuador).

- Identification of sources, shortcomings, and major impediments of the oral health system.

Medium-term Goals

- Based on multicountry comparisons, design and implementation of oral health programs in such a way as to extract lessons from country experiences.

- Development of country activity plans that are tailored to local circumstances and conditions that are capable of facilitating the types of cross-country comparison and expand the policy community's knowledge base about how to structure and implement oral health programs.

3.3 *Human Resource Development for Oral Health*

This strategy will promote the development and training of human resources appropriate to the needs and direction of the new oral health agenda in the Region and following the other elements in this strategic plan.

Short-term Goals

- Support of accreditation of schools and establishment of international standards for dental school curricula to include HIV/AIDS, hepatitis B, practice and organizational models, preventive dentistry, and information systems.

- Support of planning for production of auxiliary dental personnel.

- Continuation and strengthening of collaborative projects with WHO collaborating centers.

- Continuation of the technical advisory group to advise and support PAHO on its activities in oral health.

- Establishment of a core team for technical cooperation in areas of epidemiology, organizational development, management, finance, and preventive dentistry.

- Making WHO collaborating centers more effective as regional research and training centers.

Medium-term Goals

- Continued support and strengthening of accreditation of dental schools.

- WHO collaborating centers functioning as true regional research and training centers.

- Continued planning for increased production of dental personnel.

4. Building Strategic Alliances

The Oral Health Program operates with core funds from the regular budget to strengthen technical cooperation and promote the mobilization of extrabudgetary funds (Annex D). A significant part of the work in salt fluoridation in the Region has been initiated by PAHO with strong support from the W. K. Kellogg Foundation over the past 12 years. During this time, work in salt fluoridation has been possible and many countries, (Colombia, Costa Rica, Jamaica, and Mexico) which formerly had limited capacity to implement salt fluoridation programs have benefited from W. K. Kellogg support. In 1996, the Foundation awarded a $750,000 grant to PAHO in support of salt fluoridation programs for Bolivia, Dominican Republic, Honduras, Nicaragua, Panama, and Venezuela.

Additional funding was secured from Rotary International, with a grant of $30,000 for salt fluoridation in Bolivia.

The Inter-American Development Bank (IDB) has agreed to sponsor the First World Congress in Salt Fluoridation, which will take place in 1997 in Montevideo, Uruguay. A proposal to the IDB is in progress.

The WHO collaborating center in San Antonio, Texas, has provided active participation in the development of fluoridation programs in the Region. Specific functions of the center included program planning, cost-benefit studies, staff training, survey development, and data management and analysis. The established partnership between PAHO and the Center has set a strong foundation that ensures successful achievement of the objectives and strategies proposed in this document.

The Oral Health Program of the Centers for Disease Control and Prevention has committed resources to PAHO for the implementation of water fluoridation programs in Argentina, Chile, and Puerto Rico. Future plans include an international fluoridation training center for all the Americas, a worldwide conference on salt fluoridation, and a comprehensive state-of-the art manual/document of fluorides and fluoridation.

5. Key Issues for Discussion

(1) Iodine and fluoride in salt for human consumption.

(2) Barriers to and aids for implementing oral health preventive programs.

(3) Barriers to and aids for improving coverage and quality of oral health services.

(4) Approaches to redirect human resources development in oral health.

(5) Key stakeholders in the countries for administering oral health strategies.

Annexes

DMFT-12 INDICATORS, AVAILABLE HUMAN RESOURCES, AND PREVENTIVE POLICIES FOR ORAL HEALTH IN SELECTED COUNTRIES

COUNTRY	DMFT-12 (yr) SURVEY	DENTISTS PER 10,000 POPULATION	NATIONAL PROGRAMS OF SALT FLUORIDATION	% NATIONAL POPULATION COVERED WITH FLUORIDATED WATER
Argentina	3.44 (87)	6.81	No	30.0
Chile	In progress (96)	3.95	No	10.0
Paraguay	5.90 (83)	2.16	Projected	11.0
Uruguay	4.10 (92)	10.50	Yes	2.7
Brazil	6.70 (86)	6.72	No	41.0
Brazil, Sao Paulo	2.76 (94)			90.0
Bolivia	4.67 (95)	2.25	In progress	
Colombia	4.80 (80)	4.34	Yes	
Ecuador	2.94 (96)	10.10	Yes	
Peru	7.00 (90)	3.19	Yes	
Venezuela	3.60 (86)	3.93	Yes	27.2
Costa Rica	4.90 (93)	3.53	Yes	
El Salvador	5.10 (89)	1.46	Projected	
Guatemala	8.12 (87)	1.16	Projected	9.5
Honduras	8.34 (87)	0.47	In progress	
Nicaragua	5.90 (88)	1.27	In progress	
Panama	4.20 (89)	3.48	In progress	
Belize	6.00 (89)	0.80	Projected	
Cayman Islands	1.70 (95)			
Cuba	2.90 (89)	5.94	Projected	2.4
Dominican Republic	6.00 (86)	2.36	In progress	16.0
Guyana	1.33 (95)		Projected	
Haiti	2.20 (94)	0.32	Projected	
Jamaica	1.08 (95)	0.23	Yes	
Trinidad and Tobago	4.90 (89)	0.93	Projected	
United States of America	1.40 (91)			62.5
Mexico	Pend (96)	3.75	Yes	12.0

Source: PAHO, 1996

PAHO REGIONAL ORAL HEALTH PROGRAM

Phases of National Preventive Programs of Water and Salt Fluoridation

Phase I Feasibility Assessment	Phase II First Evaluation	Phase III Long-Term Evaluation
Baseline levels of fluoride in the drinking water	Periodic sampling and determination of fluoride in drinking water sources	Continued periodic sampling and determination of fluoride in the drinking water
Nutritional/dietary survey in preschool children (possibly already available in some countries)	Nutritional/dietary surveys in preschool children	Nutritional/dietary surveys in preschool children
Baseline study of toothpaste use in preschool children	Periodic evaluation of toothpaste use in preschool children	Continued periodic evaluation of toothpaste use in preschool children
Baseline study on marketing and use of fluoride-containing products, e.g., dietary supplements available in the market	Periodic monitoring of fluoride-containing products in the market	Continued periodic monitoring of fluoride-containing products in the market
Development of epidemiologic surveillance guidelines for quality assurance and control	Periodic monitoring and quality assurance of fluoride concentrations in water or salt	Continued periodic monitoring and quality assurance of fluoride concentrations in water or salt
Baseline DMFT and dental fluorosis surveys in 6-8, 12, and 15-year-old children	DMFT and dental fluorosis surveys in 6-8, 12, and 15-year-old children seven years after program implementation	DMFT and dental fluorosis surveys in 6-8, 12, and 15-year-old children 14 years after program implementation
Initial assessment of urine fluoride excretion in 3- to 5-year-old children (one sample/24 hours) after 15 months of implementation.	Urine fluoride excretion in 3- to 5-year-old children 15 months after program implementation (one sample/24 hours)	Periodic evaluation of urine fluoride excretion in 3- to 5-year-old children (one sample/24 hours)

Source: PAHO, 1996

1994-1996 PAHO'S ORAL HEALTH ACTIVITIES

Fluoridation in the Region of the Americas by Year 2000

EXPECTED RESULTS	INDICATORS	ACTIVITIES
Bolivia As of May 1996, country reports initial production and distribution of fluoridated salt Estimated population covered by program, one million	1. ***Completed*** Cost/benefit study for salt fluoridation program "Análisis Institucional para el Desarrollo de un Programa Nacional de Fluoruración de la Sal en Bolivia." Proposal presented to IDB, UNICEF, AID 2. ***Completed*** National survey on school children on DMFT and fluorosis 3. ***Initiated*** National study on fluoride concentration in drinking water	- PAHO conducted cost/benefit study - PAHO assisted in survey design for DMFT and Fluorosis and data analysis - PAHO trained resources for: national epidemiological survey for DMFT and fluorosis - PAHO trained resources for study on concentration of fluoride in drinking water
Chile As of May 1996, Santiago began a city-wide community water fluoridation program Estimated population covered by program, 3.6 million Projected by end of 1996: 80% of all community water fluoridated nationwide	1. ***Completed*** Design of epidemiological surveillance systems for community water fluoridation program and other fluoridation programs 2. ***Completed*** Cost-benefit study "Evaluación de costos y beneficios anticipados del programa de fluoruración del agua potable propuesto para la VIII Región, Chile" 3. ***In progress*** baseline studies: - DMFT and fluorosis - Fluoride excretion in urine	- PAHO designed epidemiological surveillance system for community water fluoridation programs, including biological and chemical monitoring of fluoride - PAHO completed training of 440 dental professionals, on epidemiological surveillance systems for community water fluoridation and management of fluorides - PAHO/Ministry of Health conducted cost-benefit study - PAHO assisted in survey design for baseline studies

EXPECTED RESULTS	INDICATORS	ACTIVITIES
Jamaica As of September 1995, country reports: - DMFT-12 of 1.08 - Percentage of sound permanent teeth of all ages 95 - Percentage of caries-free children (permanent teeth) 61 - 85% of caries reduction since 1985	1. ***Completed*** National survey on school children on DMFT and *fluorosis, as part of first evaluation of salt fluoridation* program 2. ***In progress*** Publication on "Epidemiological surveillance systems for salt fluoridation programs for Jamaica" 3. ***Completed*** Design of epidemiological surveillance systems for national salt fluoridation program 4. ***Ongoing*** Biological and chemical monitoring of fluorides	- PAHO designed epidemiological surveillance systems for salt fluoridation program - PAHO assisted in survey design for DMFT and fluorosis - PAHO trained resources for national epidemiological survey for DMFT and fluorosis - PAHO analyzed data
Ecuador As of April 1996, country reports: - production and distribution of fluoridated salt of 97% of all table salt for human consumption in Ecuador - Estimated population covered by program, 11 million Note: Project funded by FASBASE (World Bank)	1. ***Completed*** Cost/benefit study for salt fluoridation program 2. ***Completed*** National study on fluoride concentration in drinking water 3. ***Completed*** National survey on school children on DMFT and fluorosis 4. ***Completed*** Study on toothpaste consumption in preschool children	- PAHO conducted cost-benefit study - PAHO assisted in survey design for DMFT and fluorosis and trained resources, including calibration of examiners - PAHO trained resources for study on concentration of fluoride in drinking water - PAHO assisted in all baseline studies and trained resources

EXPECTED RESULTS	INDICATORS	ACTIVITIES
Uruguay Increase production of fluoridated salt for human consumption from 65% to 90% Estimated population covered by program, three million	1. ***Completed*** Design of epidemiological surveillance systems for salt fluoridation 2. ***In progress*** Legislation to increase distribution of fluoride salt to majority of population	- PAHO designed epidemiological surveillance systems for salt fluoridation program - *PAHO assisted in evaluation of quality control* for salt distribution
Colombia In progress impact evaluation of national salt fluoridation program	1. ***In progress*** DMFT and fluorosis survey 2. ***In progress*** Surveillance system for salt fluoridation, (October 1996)	- PAHO is designing an epidemiological surveillance system for salt fluoridation program - PAHO is training resources for national epidemiological survey for DMFT and fluorosis - PAHO is assisting in survey design for DMFT and fluorosis and trained resources, including calibration of examiners
Mexico In progress impact evaluation of national salt fluoridation program Estimated population covered by program, 78 million	1. ***In progress*** DMFT and fluorosis survey 2. ***Completed*** Design of epidemiological surveillance systems for salt fluoridation	- PAHO designed epidemiological surveillance systems for salt fluoridation program - PAHO/Ministry of Health trained resources for DMFT and fluorosis survey
Honduras/Dominican Republic/Nicaragua/Panama In progress implementation of a national fluoridation programs	1. ***Completed*** *Cost-benefit study for salt fluoridation program*	- PAHO conducted cost-benefit study - PAHO is assisting in project design

EXPECTED RESULTS	INDICATORS	ACTIVITIES
Cayman Islands As of September 1995, country reports: - DMFT-12 of 1.70 - Percentage of caries-free children (permanent teeth) 60	1. ***Completed*** National survey on adults and children on DMFT and fluorosis	- PAHO trained resources and assist in survey design and data analysis - PAHO analyzed data
Venezuela Country reports initial production of fluoridated salt	1. ***Completed*** In progress design of epidemiological surveillance systems for salt fluoridation	- PAHO is assisting in epidemiological surveillance systems for salt fluoridation program
Argentina	1. ***In progress*** Design of epidemiological surveillance systems for management of fluorides program 2. Rosario reports on preliminary results of DMFT survey on school children	- PAHO evaluated water fluoridation program in Rosario and prepared preliminary terms of reference for the design of water fluoridation program for Capital Federal and the Province of Buenos Aires
Document SILOS #42 "Vigilancia Epidemiológica para los Programs Nacionales de Fluoruración de Sal" Document SILOS #43 "Manual para el Proceso de Producción de Sal Fluorurada"	- In progress is final revision of document SILOS #42 - In progress is final revision of document SILOS #43	- PAHO prepared documents SILOS #42 and #43

PAHO'S ORAL HEALTH BUDGET BY BIENNIUM

FUNDING AGENCIES	1996-1997	1998-1999	TOTAL
PAHO Regular Budget			
Post	276,000	276,000	**552,000**
Non-Post	77,000	77,000	**154,000**
PAHO Country Support	90,000	90,000	**180,000**
Rotary International (Bolivia)	30,000		**30,000**
Kellogg Foundation	694,000	56,000	**750,000**
Lending Institutions:			
IDB regular budget	200,000		**200,000**
World Bank in-country loan (Ecuador)	46,000		**46,000**
Other institutional support (ministries of health, WHO Collaborating Centers, NIH/NIDR, CDC and intercountry collaboration)	240,000	240,000	**480,000**
GRAND TOTAL	**1,653,000**	**739,000**	**2,392,000**

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27th MEETING OF THE SUBCOMMITTEE ON PLANNING AND PROGRAMMING

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Provisional Agenda Item 8

SPP26/7 (Eng.)
30 October 1996
ORIGINAL: SPANISH

ADOLESCENT HEALTH

For the 1990s, the health of adolescents and young people is a key element for the social, economic, and political progress of the countries of Latin America and the Caribbean and for ensuring the Region's success, development, and competitiveness in the next century.

The Pan American Health Organization has been a pioneer in its work on the subject of health among adolescents and young people, considering its social and economic implications and the demands on health services, particularly health promotion.

At the XXXVI Meeting of the Directing Council (September 1992), the Member States approved the Plan of Action for the Comprehensive Health of Adolescents in the Americas. In this regard, the Directing Council issued Resolution CD36.R18, which urged the governments to establish national policies and plans for comprehensive adolescent health; develop bonds of collaboration between the agencies responsible for the health of this age group; promote the participation of adolescents in health promotion; and collaborate on specific programs.

During the period 1992-1996, PAHO's Division of Health Promotion and Protection has been carrying out the Plan of Action, and national and international resources that allow for substantive progress have been mobilized.

Based on this background, it is proposed that the Subcommittee on Planning and Programming evaluate the progress of the Plan of Action and discuss its adaptation; promote a new conceptual framework for development and human capital in adolescent health which is essential for the future of the countries; strengthen and consolidate national initiatives to promote adolescent health in the Region and accelerate their implementation; and provide decisive support to the search for national and international resources that will allow for appropriate implementation of the Plan of Action.

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EXECUTIVE SUMMARY

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During the period 1992-1996, PAHO's Division of Health Promotion and Protection has been carrying out the Plan of Action and national and international resources have been mobilized. There has been support from the W. K. Kellogg Foundation and the United Nations Population Fund. The overall objective of this program was to improve the scientific, technical, and administrative capability of governments in the Region, in order to initiate or improve comprehensive health programs for adolescents. The Plan of Action and the projects generated were thus a strategic mechanism for accelerating and ordering both the start-up process and the consolidation of national initiatives in adolescent health in the Region.

Based on this background, the progress achieved, and the experience acquired, it is proposed that the Subcommittee on Planning and Programming:

- evaluate the progress of the Plan of Action and discuss its adaptation;

- promote a new conceptual framework for development and human capital in adolescent health, which is essential for the future of the countries;

- strengthen and consolidate national initiatives to promote the health of adolescents in the Region and accelerate their implementation;

- provide decisive support in the search for national and international resources allowing for appropriate implementation of the Plan of Action.

1. Introduction

For the 1990s, the health of adolescents and young people is a key element for the social, economic, and political progress of the countries of Latin America and the Caribbean and for ensuring the Region's success, development, and competitiveness in the next century.

According to the Economic Commission for Latin America and the Caribbean, the current situation and future prospects of adolescents and young people in the 1990s is determined by four recent trends affecting the countries of the Region: the current serious economic crisis, which involves a loss of capital, and the need for economic restructuring and development of technological competence and international competitiveness; the resurgence and consolidation of democratic systems in the Region; the continued long-term trend toward improving educational levels in each successive group of young people; and changes in cultural institutions and values, due to the globalization and integration of communications and transportation. In addition to these shared influences, each country is at a different stage of the development process, with the resulting level of heterogeneity among adolescents and young people in the Region.

The recognition that the health of adolescents and young people is an element basic to the progress of the countries is a significant change and should have a significant impact on the formulation of development policies and strategies in the countries. The well-being of adolescents and young people is one of the most important challenges for governments in Latin America and the Caribbean, as it affects a particularly vulnerable age group from a social, economic, and health perspective. The traditional structures of the Region are changing, and programs are needed to teach adolescents and young people how to make the transition to adulthood.

According to the World Health Organization, to have healthy development adolescents and young people need: first, to have had a healthy infancy; second, to be supported by environments that give them opportunities through family and other social institutions; third, opportunities to obtain the knowledge necessary to make healthy decisions, for information, if it is to become knowledge and capable of influencing their attitudes and behaviors, must be comprehensive and relevant to the experience of adolescents; and fourth, equitable access to a broad range of services (education, employment, health, justice, and welfare) which must be sensitive to their needs.

In the countries, the existence and effectiveness of services for adolescents depend on resources, policies, and legislation. In most countries, there are laws that directly or indirectly affect young people and tell them when to vote, when to get married, at what age to drive a car, and when to serve in the military, but there are no laws that promote health in a comprehensive and balanced way.

Incorporating this age group into the health plans of the Region's countries is a recent concern and becomes increasingly necessary and urgent due to the growth of this population in terms of numbers and proportion; this is particularly true in the developing countries. This trend, determined by the duration of youth that results from the lengthening of school cycles, as well as by social changes and increasing problems among adolescents and young people, reveals the scarcity and deficiency of comprehensive health care and young people's failure to participate in their own health care and in promoting the well-being of the community.

2. Current Situation of Adolescents and Young People

Adolescents and young people up to age 24 represented about 31% (137 million) of the population of Latin America and the Caribbean in 1995; this will increase to nearly 172 million by the year 2000. Latin America has two-thirds of the total adolescent population in the Americas. It is estimated that 75% of the young population in the Region were living in urban areas in 1995, and this is expected to grow to 80% by the year 2000. The growth of the population of adolescents and young people in the Region creates a growing demand on health, education, and labor systems. The situation is aggravated by urban migration, primarily in marginal sectors, making it even more difficult for this age group to have access to education, job training, and inclusion in the labor market, with a resulting increase in juvenile crime and violence.

The varied population growth rates for youth—not only in the different countries but also at different times and in different strata within a single country—should be taken into account when formulating public policies that will have to be flexible over time and will have to be adapted to juvenile populations from different social sectors, whose opportunities for access to the different services (mainly health, education, and employment) should be taken into account from the outset.

Over the last 20 years, the level of education has improved significantly in the Region. In 1990, the gross enrollment rate[1] in Latin America and the Caribbean was 100% in the first cycle, 52.3% in the second cycle, and 17.1% in the third cycle. The proportion of the population registered, from ages 12 to 17, rose from 36.4% in 1961 to 70.5% in 1985. In 1990, this rate ranged from 40% to 50% in El Salvador, Guatemala, Honduras, Nicaragua, and Paraguay; from 55% to 70% in Mexico and Venezuela; and higher than 70% in countries such as Argentina, Brazil, Chile, Cuba, and Uruguay. The most troublesome educational disparity is that which persists in all countries between rural young people and their urban counterparts. In most countries,

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[1] Total matriculation at the educational level, regardless of the age/age group population that should be at that level of education according to the standards.

the ratio of adolescents aged 10 who are attending school is more than 70%; however, this figure falls to 50% at age 15, and by age 20 only 20% remain in the school system. At any rate, despite obvious improvements in education, countries in the Region are far from the desired standards, and also far from the countries most advanced in this respect, such as Cuba with a gross enrollment rate in secondary education of 84% for men and 94% for women, and the United States of America where these rates reach 92% and 91%, respectively (1994).

The participation of youths in political decisions and in changing production patterns is vital for the countries of the Region, which are seeking new paths toward development. To achieve international competitiveness, it is essential that those who enter the work force be technically trained and have an adequate education. In order to achieve greater equity, the level of political participation among the younger generation needs to be increased. The political participation of young people fell or came to a standstill in several countries. On the other hand, economic participation continues to grow, stimulated by gradual increases in the ratio of economically active young people.

In Latin America, between 40% and 50% of the economically active population (EAP) are adolescents between the ages of 15 and 19, with a higher ratio for men than women (2:1). In recent years, the trend has been increasing among women, especially in urban areas. It is estimated that some 10 million children are working in Latin America; many of them do so illegally, without the benefits of social security, and with low wages and poor working conditions, all of which represents a high risk to their health.

Health policies should consider this situation although the legislation is inadequate. The main reason why these children and adolescents begin to work is poverty, which is linked to the lack of development in the countries. And if poverty is the cause, it is also the result. In effect, young people leave school to help their families; they are poorly paid and miss opportunities for job training and access to better jobs; and thus the cycle of poverty continues.

The most serious and enduring harm done by the economic crisis in the Region is the reduction of time for schoolwork and children who drop out of school early in order to work. The lack of minimum qualifications will surely make it difficult for these young people to be productively integrated into the work force and will condemn many of them to underemployment. Poverty, inequity, and discrimination produce and keep an adolescent population at risk. A sizable number of adolescents are growing up under circumstances of limited resources and adversity, leaving many of them at a disadvantage in achieving health, development, and livelihood.

Some health indicators show that mortality for adolescents is low when compared to that of other ages. In 1994, mortality for adolescents was 7.4 per 10,000, compared with an infant mortality rate of 470 per 10,000 live births in the same year. In 1990, the leading causes of death in the group aged 10 to 14 years were accidents and violent acts, malignant neoplasms, and infectious diseases; the leading causes of death for the group aged 15 to 19 years were accidents, homicides, suicides, malignant neoplasms, heart diseases, and complications from pregnancy. Complications from pregnancy, delivery, and the puerperium are still responsible for high mortality rates in some countries.

Although deaths among adolescents in the Region do not represent a large percentage of total deaths, most of these deaths can be considered preventable and closely associated with lifestyles and risk behaviors. The magnitude of the residual damages and the sequelae that have great socioeconomic impact, both in terms of the cost for direct care and rehabilitation and the years of potential life lost, are not known.

It is estimated that 10% of the adolescents in Latin America and the Caribbean have a chronic disease. "New morbidities," such as learning disorders, attention deficit and eating disorders, have appeared recently. Tuberculosis is still a problem and its incidence ranges from 21.3 to 182 per 100,000 in the group aged 15 to 19 years. In several countries, heart disease is one of the five leading causes of death, and 50% of these deaths are due to rheumatic diseases. Cases of AIDS among adolescents from the ages of 10 to 19 represent 4% of all cases reported by all the countries. According to WHO, at least half of those infected with HIV are less than 25 years old, which makes AIDS an important concern for youth in Latin America and the Caribbean.

Excessive use of alcohol increased in the 1980s. Consumption of tobacco, in contrast with sustained reduction in most developed countries, continues to increase, especially among young women. The most frequently used illegal drug is marijuana, which is frequently consumed along with alcohol and tobacco. It is estimated that between 10% and 30% of adolescents and young people have had experience with marijuana. The use of cocaine, especially the base paste, is increasing in the Region, and poor and marginal preadolescents are the most frequent users of inhalants.

There are 25 million adolescent women, and each year 2 million of the 13 million births in the Region occur in this age group. The average age upon marriage in Latin America has increased and averages 20.5 years, with the variability among countries depending on factors such as the condition of women, the level of education, and increase in work opportunities. The fertility rate among adolescents has been declining in most countries of Latin America; however, the absolute number of children born to adolescents and their proportion as compared to children born to women of all ages has increased. Fertility rates are higher in rural populations and among those with less schooling.

Demographic and health surveys of women of childbearing age, carried out in Central and South America during the last decade, showed that, in the group from age 20 to 24, half have had sexual relations by age 20 and 25% by age 17. Surveys of young adults between the ages of 15 and 24 indicated that men become sexually active before women. The use of contraceptives is lower for adolescent women than for women of all ages. These figures are lower in rural areas.

Pregnancy among adolescents is a public health problem and is considered the "portal of entry to the cycle of poverty." These adolescents are seven times more likely to be poor than older mothers, their chances of divorce are three times higher, and their wages will be considerably lower. Their children have greater risk of morbidity and mortality, and the high rate of illegitimacy limits access to legal rights and health care.

In order to improve the reproductive health of adolescent women, the Conference on Population, the Conference on Women, and the Social Summit, in their respective plans and platforms of action, recommended that international agencies, bilateral agencies, and countries achieve a more responsible and equitable relation between the sexes, improve the condition of women, reduce early pregnancies, and improve the availability and accessibility of services for women. National policies should be implemented in the Region to improve the condition of women and their access to health, education, and work. Men should be considered in preventive efforts, and family planning should be a means for improving the health of women.

3. Analysis of Context in the Region

The situation of the different populations of adolescents and young people in Latin America and the Caribbean presents dangers and opportunities for the future. In several countries, the economic crisis and structural adjustment seem to have contributed to greater inequality with respect to education, health, and income, as well as to the instability of the family and lower earning capacity among young people of lower strata.

On the other hand, if development means an increase in productivity, the gradual elimination of poverty, greater equality of opportunity, and popular participation in decision-making, the current generation of young people represents a very valuable resource because it offers greater average productive capacity, more shared cultural codes, and a solid basis for an informed and participating citizenry, more so than in any previous generation.

Most countries in the Region have experienced economic problems in the last 20 years, and these problems have been exacerbated during the last ten years by rapid population growth, periods of world recession, foreign debt, sociopolitical problems, and

other factors, which in some cases have been added to and aggravated by natural disasters.

Latin America is in a transitional and developmental stage. In general, in response to the phenomenon of globalization, all the economies have ceased to be relatively closed and regulated and have become relatively open and liberalized. However, the period of generalized growth that began around 1990 has not been reflected in the production of a large number of jobs; the initial satisfaction produced by renewed growth has been replaced by the perception that investment and growth rates are still inadequate to generate the productive jobs needed to reduce the existing pockets of poverty. As an example of this, suffice it to say that in the next generation, currently estimated at 92 million people, one of every five (21%) neither studies nor works (1995).

In eight countries of the Region, 50% of the population lies below the poverty line and this varies from 19% in Argentina to 85% in Bolivia. The impact of economic misfortune on adolescents and young people in Latin America and the Caribbean is enormous and is associated with less availability of food, inadequate educational systems, insufficient access to health, insufficient access to sports and recreational activities, unemployment, desperation, and pessimism, especially in regions with geopolitical problems and drug traffic.

In the world context, peace, sustainable human development, the search for equity, and the struggle against poverty are overall priorities. In Latin America and the Caribbean there is great interest in integration, free trade, democracy, and governance, while in some subregions such as the Andean area the struggles against corruption, guerrilla forces, and drug traffic are overriding. In the context of each country, interests focus on economic growth, the problems of economic adjustment, and the planning of social development. Within the health sector, sectoral reform, efficiency, and effectiveness for achieving the goal of health for all is of the greatest interest. Restructuring and decentralization are the key elements.

At the institutional level in PAHO, institutional changes and new strategic orientations have led to a new approach to technical cooperation, focusing on planning, programming, and evaluation, on development of advocacy for health, mobilization of resources, and coordination of efforts. The new view of horizontal cooperation involves the recognition that knowledge lies within the countries of the Region and the need to include the different actors, such as nongovernmental organizations (NGOs) and private companies.

4. PAHO and Adolescents

The Pan American Health Organization has been a pioneer in dealing with the subject of health among adolescents and young people, both in terms of its social and economic effects and its implications for health services and health promotion among this age group. It has promoted the collection and systematization of epidemiological information and has published documents and books on the subject. Some works and documents offer programmatic and operational recommendations. In addition, the strategy of safe communities, healthy cities, and comprehensive local health systems promoted by the Organization implicitly includes the subject of health among adolescents and young people in its conception of comprehensive health.

At the XXXVI Meeting of the Directing Council, the Member States approved the Plan of Action for the Comprehensive Health of Adolescents in the Americas. In this regard, the Directing Council issued Resolution CD36.18 which urged the governments to establish policies and national plans on the comprehensive health of adolescents; to develop bonds of collaboration between the agencies responsible for the health of adolescents; to promote the participation of adolescents in health promotion; and to collaborate on specific programs.

During the period 1992-1996, the Pan American Health Organization has been carrying out the Plan of Action, both with its own resources and with support from the W. K. Kellogg Foundation and the United Nations Population Fund (see Table). The overall objective of the project was to improve the scientific, technical, and administrative capability of the countries in the Region in order to initiate or improve comprehensive adolescent health programs. The project was thus a strategic mechanism for accelerating and ordering both the start-up process and the consolidation of national initiatives on adolescent health in the Region.

The components of the Plan of Action were: to develop the means for adapting health services to comprehensive care of adolescents; to develop a plan for human resources training in services and teaching; to strengthen the networks of services, people, and institutions working with adolescents and young people; and to support the operational capacity for implementing and evaluating the project.

The Director has assigned top priority to the health of adolescents and young people. Despite the current situation of financial restriction, a new position was opened for a regional adviser and regular resources allocated to this subject were increased. The Division of Health Prevention and Promotion prioritized the subject of adolescence and youth, incorporating it in most of its programs and in activities with other divisions of the institution.

Regional Program on Adolescent Health

**Human and Financial Resources:
Historical Trends and Future Projections**

Year	Regular Funds		Extrabudgetary Funds	Total
	Personnel Costs	Other Costs		
1992	54,000		209,619	263,619
1993	54,000		463,680	517,680
1994	88,000	80,000	442,806	610,806
1995	88,000	95,000	382,940	565,940
1996	108,000	125,000	273,322	506,322
1997	216,000	150,000	1,150,000	1,516,000
1998	216,000	175,000	1,150,000	1,541,000
1999	324,000	200,000	1,150,000	1,674,000
2000	431,000	225,000	1,150,000	1,806,000

5. Lessons Learned

5.1 Dissemination of Information

In Latin America much information on the health of adolescents has not been collected systematically and is to be found only in gray literature. The ADOLEC/BIREME project targeted collecting, organizing, and distributing state-of-the-art materials on adolescent health in the Region, including gray literature, as a first initiative for improving this situation. A database was compiled with a list of people and institutions working with adolescents in the Region; this facilitated the dissemination of knowledge and the distribution of material.

The development of the Adolescent Information System, with additional software, was an effective way to obtain information on the health of adolescents that was common to the countries of the Region. This instrument is also used to train personnel and students in the area of health and is in great demand within the national programs. Another lesson learned was the importance of using the new Internet electronic

technology and the list of servers. The development of a PAHO homepage on adolescence was the first step. The current challenge is to balance the rational use of electronic communications and the use of other means to distribute documents and information.

5.2 Evaluation of Programs

Instruments have been developed to evaluate health services for adolescents. These are being used by some countries of the Region and include instruments that evaluate conditions of efficiency and opportunities missed in the delivery of services. The next step is to develop a guide to program evaluation at all levels of care: national, district, and local.

There is great demand in the countries of the Region for information on effective interventions in adolescent health, and thus the evaluation of programs is increasingly more essential.

5.3 Human Resources Development

To develop and implement national programs, there must be a critical mass of professionals in adolescent health. The Plan of Action has trained 1,200 professionals in the Region. A training meeting for consultants in adolescent health was developed to guide the programs in Latin America and the Caribbean, utilizing a common conceptual framework regarding the comprehensive health of adolescents. The Region's demand for technical cooperation on the subject of adolescence is growing, and most of the countries included the subject in their programs and budgets for 1997.

5.4 Leadership and Management in Adolescent Health

The development of leaders and managers in adolescent health is a priority in PAHO's program. The decentralization and municipalization process involves a demand for training in the management of adolescent programs so that such programs can be implemented.

5.5 National Policy and Advocacy Programs

Little is known about health policies regarding adolescents in the Region. PAHO's program has started an analysis of policies and legislation affecting adolescents and young people in the Region. In this area, the demand for information on models and policy instruments has continued to increase.

5.6 Critical Role of Communications Media

This is an area that is being explored and should have great development and visibility in upcoming years, given the media's significant impact on the adolescent population.

6. Challenges for Adolescent Health Programs in the Region

6.1 Service Coverage and Quality

The adolescent population between the ages of 10 and 19 represents 20.3% of the total population and one out of every three inhabitants in the Region is between the ages of 10 and 24 and lives in a city. Most of the Region's programs have limited coverage which perpetuates inequity. Sociocultural, racial, gender-based and marginal urban inequities are notable among adolescents and young people. For example, in Chile the unemployment rate among young people is twice that of adults; indigenous adolescents have half the schooling and twice as much unemployment as non-indigenous adolescents. Improving service coverage for those who need it most and improving service quality should be priorities.

6.2 Resources for Programs for Adolescents and Young People

The economic difficulties of Latin America and the Caribbean have led to a reduction in public spending on health and education. In real terms, income declined by 20% over the last 20 years. This has had a serious impact on youth, particularly those with low incomes. In this area, the advocacy and participation of youth, not only as a recipient but also as a resource, seem to be key elements.

6.3 Coordination, Efficiency, and Effectiveness

There is a need to coordinate efforts and incorporate different social actors. The national political decision made by most countries in the Region to develop adolescent health under the health sector initiative, in coordination with other sectors such as education and labor, should take shape in an operational, legal, and administrative structure in order for it have continuity. Creating synergism, improving effectiveness, and increasing collaboration are key factors. It is important to invest in the human development of adolescents; the question is what is the best way to invest in the health of adolescents. It is a challenge to integrate social and economic investment in order to plan sustainable programs, given that interventions in adolescent health yield dividends only after several years.

6.4 Sectoral Reform

The theoretical model for adolescent health care that is comprehensive and intersectoral could be at odds with health sector reform in terms of the cost for the health care that adolescents require. For example, the multidisciplinary approach, the emphasis on psychosocial development, and health promotion activities may be abandoned since activities that treat disease would presumably be more profitable. The concept of investing in human capital, a key element for sustainable development, should be weighed carefully and included at an appropriate level of discussion in the reform. It is challenging to adapt the models of care to the frame of reference of health sector reform.

6.5 Systematic Evaluation

Programs for adolescents are a recent phenomenon. In 1990, a study conducted by the World Bank demonstrated that, for 103 programs sponsored by governmental and nongovernmental agencies, the average duration of programs for adolescents and youth was from 10 to 15 years. In addition, most programs lack evaluation. Ten out of 25 programs were evaluated and none for cost-effectiveness. Becker and Prada state that most programs believe that what they are doing is important but do not know how to justify their work.

6.6 Health Information on Adolescents for Planning and Decision-making Purposes

Only 35% of the countries have national and local health diagnoses on adolescents and in most cases use traditional and negative indicators.

6.7 Policies on Adolescence and Youth, Particularly Health Policies

Only six out of 22 countries in the Region have health policies on adolescents, according to the program evaluation survey conducted in 1996 by the Regional Program on Adolescent Health.

7. Plan of Action

Based on the preceding considerations, it is proposed that the Plan of Action be modified as follows:

7.1 General Objective

The Regional Program on Adolescent Health under the Division of Health Promotion and Protection seeks to promote health and favorable development of

adolescents and young people between the ages of 10 and 24, by developing national and local programs in the countries of Latin America and the Caribbean.

7.2 General Principles

- *Comprehensive nature*: The conceptual framework for adolescent health has evolved from focusing on problems within this age group (pregnancy, drugs, violence) to promoting the comprehensive development of adolescents. It is known that risk behaviors are interrelated; thus, programs should have a more holistic approach. The multiple causality of problems among youth requires that programs include their participation in different settings such as family, school, work, friends, and different national sectors.

- *Emphasis on health promotion and protection*: Understanding the adolescent as an individual in development requires providing the adolescent with life skills, focusing on health promotion and protection and not merely on preventing high-risk behaviors and treating disease.

- *Equity*: Programs will be specially designed to support those adolescents with the greatest need in health, education, and work, by utilizing appropriate technologies and incorporating the gender dimension.

- *Youth participation*: Adolescents and young people will be the subject and object of health actions; this means the development of broad and expeditious mechanisms for youth participation.

- *Social and community participation*: The program should arise as a community need and should have community participation. Promoting a positive image of adolescents and young people would be recommended. The communications media should be part of the solution and not part of the problem.

- *Intersectoral and interdisciplinary approach*: To promote the comprehensive development of adolescents and young people, a broad range of services are needed which no single sector is capable of delivering. The intersectoral approach is a key element, involving the participation of the different groups that interact with young people such as the family, school, health services, the church, and others.

- *Networks*: Networking is understood as a linking strategy for coordination and exchange among institutions and/or people who decide to combine their efforts, experience, and knowledge voluntarily and systematically in order to achieve

common goals with regard to the health of this age group. Networks provide another strategy that is crucial for achieving objectives.

- *Leadership*: Successful programs for adolescents and young people are directed by trained, charismatic, highly sensitive people who foster youth participation, who are not only concerned about and love adolescents but who also have high expectations of them and work intensively to give them knowledge and skills so that they will be successful. They have managerial and administrative abilities, as well as the ability to obtain financing. Developing young leaders is key for program interventions and for developing youth organizations and community.

7.3 Lines of Action for the Future

The following lines of action are proposed. They will be readjusted according to the final report on the evaluation of adolescent programs in the Region and discussions on the subject in the different scopes of action of PAHO's Governing Bodies:

- Develop policies on adolescents and youth and advocacy in the Region. The Program tries to work with the countries of Latin America and the Caribbean to facilitate the development of policies, adequate legislation, and advocacy for the health of adolescents and young people. Among the activities to be carried out are: identifying potential leaders in the Region, incorporating different disciplines and sectors from the countries in the Region for training on the subject; setting up a committee on policy and advocacy for adolescents in the Region in order to promote this process; training leaders in action and designing a Plan of Action for their countries and for the Region; cooperating with the countries of the Region in the design, publication, and dissemination of advocacy materials such as the conceptual framework for health policies regarding adolescents, legal instruments, and the report on the current situation with respect to policies and legislation in the countries of Latin America and the Caribbean; carrying out, together with countries in the subregion, case studies on adolescent health policy, using horizontal cooperation; and mobilizing resources for designing and testing advocacy tools with the communications media: television, videotapes, newspapers, and spokespersons.

- Support national and local programs in developing and adapting services for adolescents and young people, incorporating different actors. The Program seeks to support adolescent programs at the national and local level in developing, adapting, and improving services; incorporating the application of successful tools and strategies; and consolidating the instruments developed by PAHO, among other activities.

- Analyze the health situation of adolescents and planning and programming activities with the participation of young people at the different levels; publish, adapt, and translate successful instruments for improving services, such as those related to participatory methodologies, family and adolescence, health indicators, computer system on adolescents, evaluation of the quality of care, and evaluation of opportunities missed.

- Distribute documents through the network of health professionals in the field and in training courses.

- Support the countries in training health professionals to use the instruments developed previously.

- Form a discussion group to analyze the impact of health sector reform on comprehensive health programs for adolescents in Latin America and the Caribbean.

- Work with the countries of the Region to systematize the data on successful experiences in adolescent health and to identify strategies used and lessons learned.

- Develop a database of successful and unsuccessful health programs for adolescents in Latin America and the Caribbean.

- Support the countries in developing training courses in adolescent health at the primary care level.

- Contribute to the development of human resources in comprehensive adolescent health, with special emphasis on leadership. The primary care levels are overburdened with the traditional ways of responding to the needs of adolescents. In order to be innovative, the adolescent and youth population should be regarded as a human resource which includes health workers. Out of 6,000,000 providers, 50% are young people. There are 300 medical schools and 600 nursing schools with 500,000 students who should be considered in the action proposal, assessing them as workers and students and adapting methodologies and educational course content. In this way, activities will be carried out that seek to redirect undergraduate and graduate-level health sciences on the subject of adolescence; strengthen the development of leadership; identify institutions and programs with experience in leadership within the Region and develop a leadership curriculum for adolescent health; participate in meetings of directors and university undergraduates in order to incorporate and coordinate efforts to change the

curriculum on the subject of adolescence; and develop courses for remote training in adolescent health over the Internet.

- Strengthen information and services networks with activities directed to: designing with the countries in the Region a system to compile available data on adolescence and youth and provide access to it through the ADOLEC/BIREME centers based on Internet technology (homepages); piloting an information system through the Internet in two countries of the Region; supporting the maintenance of discussion lists (LIST SERV) on adolescent health in the Region and in subregions, depending on what subjects are of interest; and disseminating selected material and documents through the electronic network and the network of institutions using different types of dissemination methods: electronic, printed, training.

- Coordinate the efforts of different agencies and institutions involved in adolescent health in the Region, in order to strengthen the Interagency Committee for the Comprehensive Health of Adolescents in Latin America and the Caribbean.

- Implement and monitor the health component of the Regional Plan of Juvenile Action (PRAJDAL), promoted by the Ibero-American Youth Organization (OIJ) and ratified by the Conference of Youth Ministers in Buenos Aires, Argentina, in 1996.

- Incorporate the communications media in the effort to promote adolescent health, by designing a television character to promote health among preadolescents; conducting communications media and adolescent health promotion seminars; training leaders and professionals to work actively with the communications media.

- Research and mobilize resources. Carry out research on the health situation of adolescents in the Americas, utilizing sensitive indicators; carry out studies of the cost-effectiveness of interventions; support research on priority and innovative subjects; and mobilize national and international resources on the subject.

Based on five years of what to date has been successful experience in implementing and developing the Plan of Action and the projects supporting it in adolescent health, the Program is now in the process of designing and presenting to the W. K. Kellogg Foundation and the United Nations Population Fund proposals on projects to support the implementation of the preceding lines of action. With these additional resources, plus PAHO's own resources, a total investment of US$ 5 million is anticipated. There are also preliminary discussions regarding an action proposal with the Inter-American Development Bank.

Whatever the amount of regional resources, it will be inadequate; it will thus be essential, at the country level, to produce national and local action plans and programs. Also, in addition to national investment, it will be essential to submit proposals to multi- and bilateral international assistance agencies. Only this approach and the collaboration of private groups and the NGO community interested in the subject will provide the flexibility needed for adolescent health programs in the Region.

8. Action Requested of the Subcommittee

It is requested that the Subcommittee on Planning and Programming discuss and enhance this document and, if it sees fit, transmit it to the Executive Committee.

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