

Strategy for Improving

General Health In the Americas
Through Critical Advancements
In Oral Health

The Way Forward: 2005 - 2015

Technology and Health Services Delivery
Health Services Organization
Regional Oral Health Program



**Pan American
Health
Organization**



Regional Office of the
World Health Organization

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Working Group

Team Leader:

Saskia Estupiñan-Day,
Regional Advisor of Oral Health, Pan American Health Organization

Members:

Peter Cooney
Chief Dental Officer, Health Canada

Olaya Fernandez Fredes
Chief Dental Officer, Ministry of Health, Chile

Norissa Giangola
Consultant, Pan American Health Organization

Farah Husain
Harvard School of Public Health, Intern with PAHO

Trevor Milner
Consultant, Pan American Health Organization

Fannye Thompson
Senior Dental Officer, Ministry of Health, Barbados

Heriberto Vera
Chief Dental Officer, Ministry of Health, Mexico

Acknowledgments

Carissa Etienne, *Assistant Director*
Pan American Health Organization

José Luis Di Fabio, *Area Manager, AD/THS*
Pan American Health Organization

Hernán Montenegro, *Unit Chief, THS/OS*
Pan American Health Organization

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Executive Summary

The purpose of this document is to outline the ten-year oral health strategy for the region of the Americas.

The goal of the strategy is to promote and protect overall health in the Americas through advancements in oral health care. This strategy will guide the development for sustainable projects, policies, best practices, and resources that will reduce the burden of diseases related to poor oral health at the individual, local, regional, and national levels.

Improved oral healthcare is integral to PAHO's promotion of the Health-for-All agenda established in 1977 advocating health equity and to the Millennium Development Goals (MDGs) established in 2000 advocating overall global development. To that end, this strategy

- Was developed in accordance with the United Nation's Development Agenda, and supports the three MDGs related to health: improvements in maternal and child health by addressing vulnerable groups; and combating HIV/AIDS and other diseases by leveraging oral health to promote general health care. Increased awareness of and investment in the health priorities set by the MDGs must be accomplished by a wide range of policy dialogues, partnerships, and intersectoral actions.
- Emphasizes the functional integration of oral health into diagnostic primary health care in order to advance national health development and foster social protection between and within countries.
- Emphasizes cooperation in PAHO's five priority countries: Bolivia, Haiti, Honduras, Guyana and Nicaragua; and secondarily on: Ecuador, Guatemala and Paraguay.

Each objective of the strategy addresses the three principal health challenges in the region, and falls within the PAHO framework of technical cooperation:

- (1) **Completion of unfinished agenda** – Equity of care to ensure a minimum level of access to oral health care for every individual with a focus on vulnerable groups.
- (2) **Facing new challenges** – Integration of oral health care into primary health care services, as a critical point for early disease diagnosis and prevention, through greater collaboration with government and non-government agencies, the private sector, and dental and medical institutions.

(3) Sustaining existing achievements – Maintenance and improvement of current preventive programs; continued surveillance; effective utilization and application of health care resources; and the transfer of information and technology.

This strategy depends on a scientific benchmarking system to mark the progress in oral health for all populations within each country. This new focus on measuring advancements seeks to herald in and promote positive change in our region.

Background

PAHO has responsibility to drive best-practice policy and results in the Region

The Regional Program of Oral Health of the Pan American Health Organization, PAHO, has the responsibility for spearheading the direction of oral health policy to the 35 member nations. PAHO's Organization of Services unit within the Technology of Services Delivery area (THS/OS) guides implementation of best-practice strategies and policies, garners international resources and builds partnerships that optimize implementation and outcomes.

What we have accomplished. Where we are going

PAHO's previous ten year strategy saw unprecedented successes in the advancement of oral health care. The policies, tools and training provided to member countries resulted in significant caries reduction throughout the region. The next ten years will not only build on these successes, but will address critical gaps in general health care such as access to care among the most vulnerable groups and the recognition of oral and systemic associations.

Process: Drafting the Strategy

An integrated approach to improve oral health was used in the formulation of this strategy. This approach involved extensive collaboration with Dental Chief Officers (DCOs) and experts from around the region. The process entailed the collection of existing scientific data on oral health interventions, consultation with stakeholders, and submission to independent advisors from developed and developing countries for review and feedback.

Urgent call for action

Barriers to Oral Health

Great strides have been made in improving oral health and oral health care in our region over the past decade. Data from national health surveys has shown a marked decline of dental caries in our population. These improvements can largely be attributed to national preventative programs including water and salt fluoridation, greater awareness of proper oral hygiene, and better oral health care practices. (1)

DMFT is a unit of measurement describing the amount of caries in a population. WHO recommends a DMFT score of less than three at age 12. In the early 1990's, DMFT scores were above five for 14 countries, between three and five for ten countries, and below three for only six countries. As of 2000, only two countries had DMFT scores greater than five, seven countries had between three and five, and 29 countries had less than three. This results in a 35-85% caries reduction and demonstrates a significant shift in the epidemiological profile of dental caries throughout the region.

Despite these dramatic improvements, the burden of disease is severe and remains notably high. Poor and inequitable health care, the changing pattern of oral disease such as HIV lesions and a decrease in funding are prominent signs of the ongoing health crisis in the Americas. (2)

These profound and consequential problems have impeded the desired progress in the oral health status of our region. There are many barriers in our ability to reach all populations. Oral diseases are afflicting some population groups differentially based on sex, income, age, and race or ethnicity. Systematic technical cooperation among PAHO member countries has produced detailed DMFT scores. However, national and provincial data for other oral and craniofacial diseases for many of these groups are limited or nonexistent. Disadvantaged groups must be identified, their needs assessed, and the differences in their oral health status understood in order to develop interventions targeted at reducing these disparities.

Adding to our challenge is the mounting body of evidence that demonstrates the link between oral health and systemic disease. Early manifestations of systemic origin can often be initially observed in the oral cavity. (3) Risk factors for systemic disease frequently coexist and interact with oral disease. Given this, the integration of oral health care as a critical component of primary services is the first step to ensure better health in the Americas. In fact, oral health and general health are intertwined, interrelated, and integral to each other. Prevention strategies should focus on reducing these risks so that the general population as well as high risk individuals yields benefits.

The opportunity

Integrating oral health into primary health care services, improving the equity of care, and maintaining successful preventive oral health care programs is vital. Recent evidence linking oral and systemic health has given us a new opportunity to implement the integration of oral health and general health in a multifaceted approach. Oral health means more than good teeth; it is integral to general health and essential for well-being. It implies being free of chronic oro-facial pain, oral and pharyngeal (throat) cancer, oral tissue lesions, birth defects such as cleft lip and palate, and other diseases and disorders that affect the oral, dental and craniofacial tissues, collectively known as the craniofacial complex. (4)

A combination of individual, community, and professional actions is required to take advantage of this opportunity. Many countries have benefited from large scale achievements in oral health due to knowledge, best practices, and technical expertise from around the world. Definitive data and a large number of studies on the effectiveness of salt and water fluoridation ushered in a new era of health promotion and disease prevention in preventing dental caries. (5)

Thus, an opportunity exists to create and implement an effective oral health strategy that will further reduce the morbidities from oral diseases through similar concepts of a strong civil society and international involvement. Successfully implemented models require an approach that is feasible and applicable within diverse populations, available material and human resources, existing institutions, and current technologies. The integration of oral health care into primary health services to reach the most vulnerable groups, understand oral and systemic associations, and maintain successful preventive and health promotion programs is essential. Effective interventions that will raise the quality of life and decrease financial burden will allow communities to enjoy longer, healthier lives.

Summary of strategy

This strategy provides a plan that will assist member countries in achieving optimal oral health outcomes for the next ten years. It is based on the driving principals of public health which are: prevention, health promotion, health protection, population, health assessment, and disease surveillance. Each tenet is included and actionable at the following objectives levels:

- ***Best Practice Training and Dissemination*** - Countries that have already experienced positive change in their oral health status serve as learning opportunities for other countries.
- ***Partnerships*** - Emphasis is placed on building partnerships with governmental and non-governmental agencies, PAHO regional offices, international organizations, and the private sector in order to assist with the implementation of this strategy and promote capacity building. An approach that leverages all stakeholders towards a common goal is central to this strategy.
- ***Upstream Investment*** - The overarching emphasis for action is on upstream investment. Intervention is targeted at critical periods in order to prevent expensive and detrimental diseases.
- ***Measurement of Progress along Scale and Time*** - The strategy has a ten-year horizon, but each goal will be evaluated at shorter intervals for progress. The epidemiological profile for countries and segments of populations will be measured along a development continuum. These intervals are defined as: ***short term*** – one to two years; ***medium term*** – three to five years; ***long term*** – six to ten years.

Objective # 1: Completion of unfinished agenda

*To ensure a minimum level of access to oral health care for all,
by addressing gaps in care for the most vulnerable groups*

Despite the advances in reducing DMFT scores in the last ten years, there is still much work to be done. There are profound and consequential disparities in the oral health of our citizens. For example, DMFT-12 scores, the only reliable indicator available for all regions, vary greatly within and between countries. DMFT-12 for Montserrat is 9.5 compared to 0.2 in Bermuda. Similarly, caries prevalence ranges from 95% in Belize to 37% in Barbados. (6) The problems of selected populations and the effects on their well-being that result from lack of access to care is most obvious when looking at oral health indicators within low-income families, marginally socialized groups, geographically isolated or otherwise disenfranchised citizens. Women may be less likely to obtain proper care due to family obligations and work responsibilities. Early childhood caries (ECC or baby bottle decay) characterized by rampant decay is still prevalent in many parts of the region. (6) Members of racial and ethnic minority groups also experience a disproportionate level of oral health problems. Medically compromised or disabled individuals are at greater risk for oral diseases, and, in turn, oral diseases further jeopardize their health. *In short, and troublingly so, those who suffer the worst oral health are found among the poor of all ages, with poor children and elderly particularly vulnerable.* (4)

The following WHO recommendations developed in 1981 are still unmet by the region's most vulnerable groups:

- 50% of children between 5-6 are caries free
- Global average DMF scores ≤ 3 by age 12
- 85% of the general population retain their permanent dentition at age 18
- 50 % reduction in the number of edentulous people between 35 – 44
- 25 % reduction in the number of edentulous people at 65 and above.

DMFT scores for the five priority countries are better than most developing countries (See table No. 1). However, large discrepancies may still exist within these countries. PAHO's achievement in reducing overall caries rate over the past ten years demonstrates that DMFT scores are an appropriate marker for gauging dental caries, but not the only indicator to assess the oral health needs of a nation. Countries that have a low DMFT score for 12-year olds may have higher readings for other populations such as the elderly, medically compromised, or rural poor. They may also experience other oral health problems such as oral cancer or cleft lip/palate. Better surveillance methods including these problems as well as additional indicators such as periodontal disease (CPITN), oral HIV lesions (Melnick's Index), oro-facial trauma, or dental fluorosis

(Dean's Index) may be necessary to identify deficiencies and to illustrate future progress. Thus, the oral health status of select populations within these countries must be identified, evaluated, and addressed as per PAHO and country guidelines.

Bolivia	4.6
Honduras	4.0
Nicaragua	1.8
Guyana	1.3
Haiti	1.0

Source: PAHO/THS-OS-ORH, 2005

The reasons for disparities in oral health are complex. In many instances, social, economic, and cultural factors are the explanation. In other cases, disparities are exacerbated by the lack of oral health programs. Lack of transportation, household demands, physical disability, or other illness may also limit access to services. Still other reasons may be insufficient resources, lack of public understanding and awareness of the importance of oral health.

Control of oral disease depends on availability and accessibility of oral health systems; and risk reduction is possible through services oriented towards primary health care and prevention. Basic oral health assessment within primary care should be available to all individuals. This strategy must, therefore, facilitate possible solutions that address the emerging oral health needs in the Americas in light of existing social, political, behavioral, and economical barriers to health and well-being.

Short Term Goals: One to two years

1. Identification of vulnerable groups according to guidelines set forth by both the country and PAHO.
 - Geographic vulnerability - local DMFT scores
 - Social/Cultural vulnerability - age, gender, SES, education, race/ethnicity
 - Medical vulnerability - immunosuppression/HIV, pregnancy, nutrition

2. Identification of oral health needs of vulnerable groups according to country assessment.
 - Oral health indicators other than DMFT - periodontal disease, HIV associated lesions, ECC, fluorosis, oral cancer, trauma, birth defects, etc.
 - Oral health services - access to care, quality of care, training of providers/auxiliary, attitudes of providers/auxiliary.
3. Design, develop and implement an appropriate pilot intervention based on vulnerable group.
 - Select an area or country for intervention in coordination with country offices and partners.
 - Develop a segmented intervention model which offers a basic preventive oral health package by age groups and population group.
 - Develop strategies for reaching school children, pregnant women, and older adults.
 - Test innovative strategies that address the needs for each age group.
 - Monitor and evaluate the pilot project.

Medium Term Goals: Three to five years

4. Select and Disseminate Best Practice Models.
 - Replication and scale-up Best Practice Models among all vulnerable groups
 - Promote supportive legislation for Public Policy
 - Monitor and evaluate

Long Term Goals: Six to ten years

5. Penetrate Market.
 - 100% access to first level service over ten years
 - Monitor and evaluate

Best Practice Model

Health Promotions and Marketing – A driving principle to implement goals

Most oral diseases are preventable, and many basic oral services are simply education of basic oral hygiene and practices. Therefore, it is critical to carefully integrate planned communications and marketing for both citizens and health care providers in each of the tactics of this plan.

- Methods to change individual behavior must be accompanied with population-based interventions.
- Health promotion and marketing to involve partners and new technologies will be critical.
- Best practice marketing and education materials will be replicated for use and adapted for each country.

Programs and Technologies – Replication of best practices to implement goals

Cost effective techniques have been developed that will ensure oral health services to the most vulnerable groups. Examples of successful programs in the region and other ideas that have been generated are listed below:

- Implementation of ART technique as a school based program
- Promotion of school based tooth brushing with full involvement of the private sector as donors/promoters etc
- The expansion of the healthy schools program to include caries free schools.
- Work with nutrition programs to tackle over consumption of sugar especially in the school setting.
- Work with indigenous health programs to provide ART in rural and isolated areas
- Work with family health and elderly health programs to incorporate good oral health practices to their constituents
- Establish “Maintain the Healthy Child” programs

Example Countries for Best Practice Models (ART)
Mexico (7), Peru (8), Uruguay (9)

Measurement of Progress

Critical to the success of any strategy is a clear way to track and measure the progress of predetermined goals. This scale allows each country to measure the progress of its population against their investments according to set goals. Countries and PAHO can then evaluate where successes are forthcoming, and where more work is needed to meet each of the Strategic Plan goals.

Figure # 1 – Comprehensive Framework for Progression of Oral Health Care

This framework serves as a benchmarking tool for each country to understand its current Oral Health Services Status (by population) and then gauge and measure progress.

1. Community Prevention

Fluoride Programs

Salt

Water

Milk

Health Promotion: Population-based

Importance of oral health for general health

Importance of nutrition and good oral health practices

Economic and social costs

Quality of life impact

Health Promotions: Targeted

Media Linkages & Groups

NGOs

Health Promotion Groups that deal with: Obesity, Tobacco, Nutrition, Elderly Health

Academic Institutions

Private Sector

2. Specific Prevention

Sealant Programs

Conventional

ART

Fluoride Delivery

Varnishes

Topical applications

Rinses

School Based Programs

Health education

Fluoride delivery

Flossing

Brushing Programs

Vulnerable kids

Seniors

3. Identification and Maintenance of Health by Preventing Disease or Further Disease

Models for education, care, instruction, and intervention by segment

Package elements	0-20	20-40	40-60	60+
Plaque awareness	☺	☺	☺	☺
Instruction of toothbrush use	☺	☺	☺	☺
Instruction of dental floss use	☺	☺	☺	☺
Self-Application of Fluoride	☺			
Self-Exam (see sample procedure, Annex I)		☺ Incl. cancer	☺ Incl. cancer	☺ Incl. cancer
Hygiene/care of prosthetics				☺

Ultimate Level – Comprehensive restorative treatment

Maintain health by addressing and curing current disease patterns

4. Improvement

Improve overall health by recognizing and associating oral disease with other diseases.

Advanced dental practices

Reference: PAHO/WHO THS/OS/OH, July 2005

Special Considerations

Definition of vulnerable groups is still in development and will vary in its operation from country to country.

Oral health plans for vulnerable populations must be incorporated into existing national public policy in order to be effective.

Partners

Human Resources both from within PAHO programs such as PHC, Elderly Health, Family Health, Nutrition, and from within Ministries of Health.

Other partners from the private sector will be encouraged to help develop specific projects and programs, dental supply companies, dental schools, dental associations, research institutions and NGO's.

Objective #2: Facing new challenges

Integration of oral health care into primary health care services

The interrelationship between oral and general health is being proven by mounting scientific evidence. In fact, the mouth is the window to total health and well-being. It is home to millions of microorganisms and opportunistic infections that can affect many organs. Oral disease has been associated with cardiovascular disease, diabetes, stroke, and adverse obstetric outcomes. The oral cavity is also the first place that critical diseases can be diagnosed. For example, oral manifestations are usually the first clinical signs of HIV, vitamin B-12 deficiency, oral cancer, and eating disorders. Lifestyle habits such as smoking, poor nutrition, intravenous drug use or unsafe sexual practices can be detected through regular oral examinations. Injuries from oro-facial trauma can extend beyond the craniofacial complex and must include a multidisciplinary approach (4). Therefore, oral health care should be incorporated into general health promotion, both as a preventative and a diagnostic tool in order to foster healthy lifestyle choices.

Importantly, integration of oral health into primary health care strategies will also leverage progress toward MDGs in the new global development agenda. Maternal health, child health, and HIV/AIDS have been highlighted in three of the eight developmental goals. All have direct implications on oral health. (See box) Such a variety of diseases and conditions has the potential to interfere with daily functioning and quality of life. Thus, optimal general health cannot be achieved without optimal oral health. Oral health must be incorporated into the triage process when prioritizing sick or injured people for treatment according to the gravity of their illness. A broader definition of oral health will have important implications on the provisions of care and in becoming an integral part of general health care programs.

It is a fact that the role of the dental health care worker in the early recognition of systemic diseases has been grossly under-utilized. This is true, for example, in the detection of HIV. It seems logical that improved coordination of services among the oral health care practitioner, who is trained in the identification of oral manifestation of HIV/AIDS, the physician and ancillary health care workers would allow for early disease detection and diagnosis.(3)

Proper oral health during pregnancy is essential for the mother and the child. Hormonal changes during pregnancy can contribute to sensitive and bleeding gums, benign tumors, and/or dietary changes. Poor oral health can exacerbate these conditions and adversely affect the developing baby. Advanced gum disease during pregnancy has been associated with preterm labor and low birth weight babies. (4)

The elderly, medically compromised, and individuals with physical and mental disabilities are also at a greater risk for oral disease. Nutritional deficiencies, drug/drug interactions, and immune dysfunction may pose further problems and contribute to poor oral and systemic health. Access is often difficult for these individuals and treatment is usually complex. Thus, a multidisciplinary team approach is necessary. (4)

The above narrative therefore speaks eloquently of the reasons why oral health has to be integrated in all aspects of the general health structure and delivery services. Simply stated, optimal general health cannot be achieved without optimal oral health.

The regional strategy will orient its approach towards integrating oral health care as a primary sister strategy of Primary Care due to the importance of oral care as both preventative and diagnostic measure for general health. The challenge lies in establishing a coordinated, effective, and sustainable strategy to incorporate oral and general health services. Organizational integration will require the assistance of the existing institutions, Ministries of Health, community leaders, and the private sector. Past agendas have not addressed the functional absorption of oral health care into primary health care services. The following is a proposed outline for the merger in its structural, administrative, and operational aspects.

Given that, there are two perspectives that both have to be tackled in conjunction with country Ministries of Health.

- One is the integration of Oral Health Programs and activities into the general health programs in the Ministries of Health, in all their structural and administrative aspects.
- The other is the integration of oral health in the delivery of health services and in the operational aspects of health delivery and promotions.

Structural/Administrative

Structural and administrative integration of oral health into general health programs at the national level (MOH)

Short term – One to two years

1. Establish Dental Chief Officer (DCO) network.
 - Establish/ Fill country DCO position with decision-making power on policy and budget allocations (75% country participation)
 - Promote DCO network
 - Incorporate mechanism for easy transfer of information between countries
2. Develop strategies and mechanisms for the delivery of oral health programs within current/ongoing PHC services (i.e., community health centers, ongoing national/regional programs) specific to country health needs and resources.
 - Promote/raise awareness of the linkages between oral and general health.
 - Continuing education in oral health for all health professionals

3. Identify and disseminate best practice models of public policy and policy formation tools for critical disease identification and control systems.

Medium Term – Three to five years

4. Monitor, evaluate, and build on oral health programs tailored to country needs.

Long Term – Six to ten years

5. 100% country participation in DCO network.

Delivery of Services

Operational integration of oral health into primary health delivery

Short term

1. Develop and implement a framework for provisions of basic oral health care in primary health care services.
 - Define basic age-appropriate oral health services required within the framework.
 - Oral screening should be part of routine visits
 - Include oral health as a component of other targeted preventive diseases (HTN, diabetes, HIV, antenatal care)
 - Design and create training module for non-dental health care providers in identifying oral manifestations linked to systemic disease.
 - Incorporate emerging technologies and cost-effective interventions
2. Identify or create best practice models specific to country health services for integrating oral health into primary health care delivery.
 - Select basic model for best practice delivery services.
 - Develop marketing plan to “sell” model

Mid Term

3. Full integration of oral health care personnel into delivery of services.
 - 100% of dental public health providers part of primary health care strategy
 - Incorporate ART technique as part of dental school curriculum.

4. Best practices models disseminated.
5. Promote capacity building with dental and medical institutions, government and non-government agencies, and the private sector to integrate strategies.

Long Term

6. 100 % integration of oral health care into the health services triage process.
 - Acceptance of ART as a standard modality for restorative treatment
 - 100% penetration of interventions in private and public settings at regional and national level
 - 100% dental and medical participation in delivery of oral health in PHC services

Best Practice Models

Chile, Barbados, Mexico

Special Consideration

Needs assessment should be carried out based on evidence from studies and research. New lines of research that address the most critical oral health needs should be undertaken from these results.

It should be expected that there will be some amount of resistance to change within the dental profession, and that training and education for dental and non-dental health care professionals will be a critical first step within each of the tactics of this objective.

Partners

Human Resources both from within PAHO programs such as PHC, Elderly Health, Family Health, Nutrition, HIV/AIDS, etc. and from within Ministries of Health. External partners will include the private sector, dental supply companies, dental schools and associations, research institutions and NGO's.

Objective #3: Sustaining existing achievements

Advancing proven successes in health

Fluoridation

Over the past ten years, PAHO has focused the bulk of its efforts in providing best practice policy, implementation, and technical assistance to the region to promote salt and water fluoridation. As a result, the majority of countries have established policies and infrastructures that allow for optimal fluoridation. Country policies were guided and established to allow these programs to become self-sustainable.

Fluoridation programs have been one of the most successful public health interventions, and have helped shift the epidemiological profile of every country in the Region, as seen in Table No. 2 and 3/Figure 2. They have achieved large public health gains in almost every country in the Americas. They have saved millions of dollars in treatment costs associated with dental decay and the related pain, suffering, and absenteeism from work and school. Salt and water fluoridation programs in the region have proven to be cost effective, scientifically valid, and sustainable. (10)

A typology using DMFT-12 scores was developed in the early 1990s to measure the progress of nations along an oral health development continuum. In this typology, the DMFT-12 score was the only criterion used due to its availability and ease of measurement in most countries of the Region. This indicator allowed for reliable and valid cross-country comparisons. Typology used to indicate the DMFT profile was divided into three stages corresponding to severity of dental caries:

- *Emergent* was defined by a DMFT-12 score greater than five and absence of a national salt fluoridation program;
- *Growth* was defined by a DMFT-12 score between three and five and absence of a national salt fluoridation program; and
- *Consolidation* was defined by a DMFT-12 score less than three and the presence of a national salt fluoridation program.

Table 2: Development typology in oral health

TYPOLGY TABLE	Emergent DMFT > 5 14 countries	Growth DMFT 3-5 10 countries	Consolidation DMFT < 3 6 countries
<i>(Before 1990)</i>	Belize Bolivia Brazil Chile Costa Rica Dominican Republic El Salvador Guatemala Haiti Honduras Jamaica Nicaragua Paraguay Uruguay	Argentina Canada Colombia Ecuador Cayman Islands Mexico Panama Peru Trinidad and Tobago Venezuela	Bahamas Bermuda Cuba Guyana Dominica USA Bahamas Bermuda Cuba Guyana Dominica

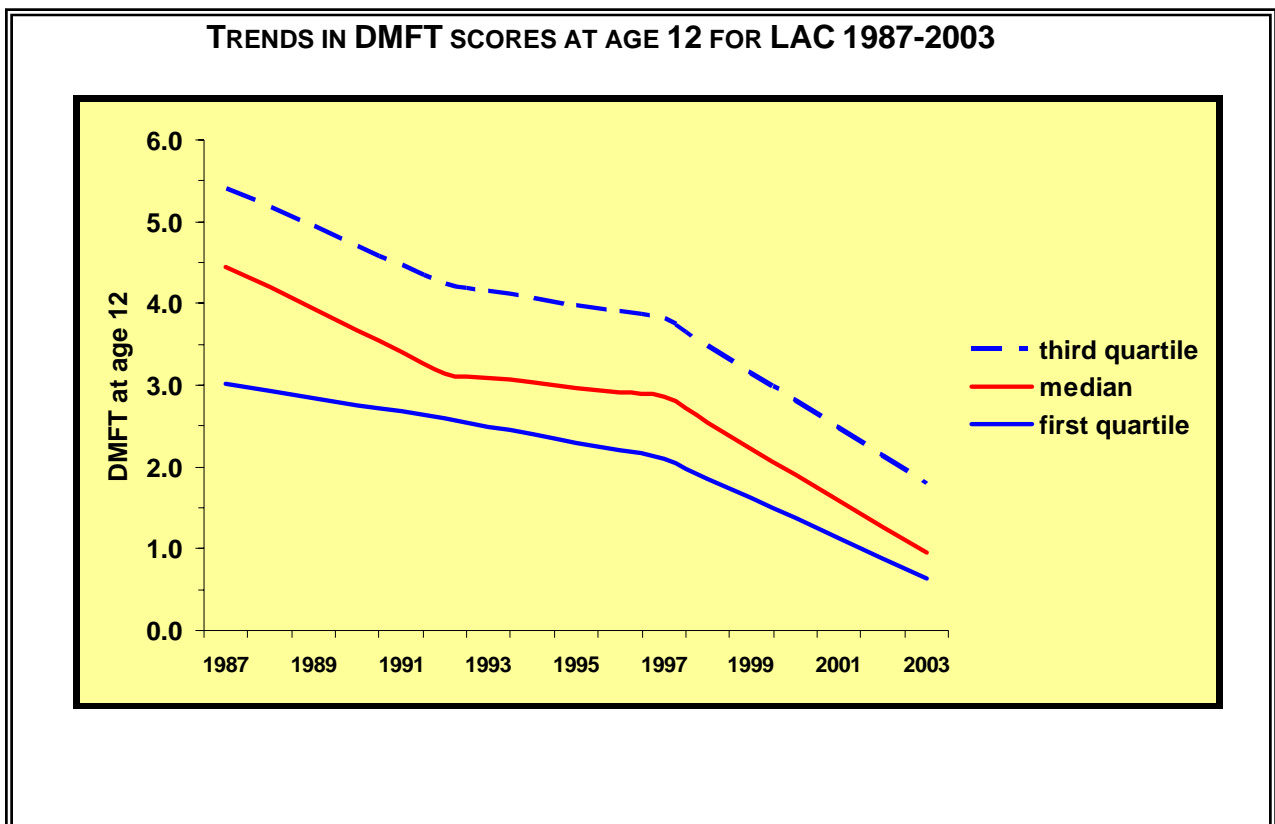
Table 3: Development typology in oral health

TYPOLGY TABLE	Emerging DMFT > 5 2 countries	Growth DMFT 3-5 7 countries	Consolidation DMFT < 3 29 countries
<i>(Circa 2004)</i>	Guatemala St. Lucia	Argentina Bolivia Chile Dominican Republic Honduras Panama Paraguay	Anguila Aruba Bahamas Barbados Belize Bermuda Brazil Canada Cayman Islands Colombia Costa Rica Cuba Curacao Dominica Ecuador El Salvador Grenada Guyana Haiti Jamaica Mexico Nicaragua Peru Suriname Trinidad and Tobago Turk and Caicos Uruguay USA Venezuela

Source: PAHO, 2004

The shift in the typology table is a testament to the efficacy of the proven successes in fluoride programs accompanied by a strong health promotion campaign. Due to this progress, typology must be redefined to encourage further progress and ensure advancement. The majority of the countries listed as Emergent have now moved from that category, thereby requiring new parameters to classify countries as either being in the Emergent, Growth or Consolidation stages. The target is that each country involved in a fluoridation program in accordance with their current state, should advance at least one stage. It is, therefore, critical that PAHO continue to provide the leadership and guidance to ensure that the established goals are protected and sustained.

Figure # 2



Source: PAHO - Technology & Health Services Delivery; AD/THS/OS and Governance, Policy & Partnerships; DPM/GPP/SP; Washington, DC, 2005

Atraumatic Restorative Treatment (ART)

With the high burden of disease and poor access to health care, innovations are necessary to treat teeth that are already decayed to prevent further infections or loss of teeth. Traditional treatment for progressive dental caries is expensive and largely

unavailable. However, ART processes require minimal technology and can be implemented by trained health staff without a dental degree. The advantages are clear: ART relies on a simple, biological process that requires minimal mechanical preparation for restoring decayed teeth. It does not destroy or invade non-infected teeth and therefore reduces both tooth loss and further decay. It also does not require expensive equipment. The process removes carious tooth tissues using hand instruments only, and restores the cavity with a glass ionomer, a material that adheres to the tooth. The process does not inflame the pulp or gingiva, and helps to release fluoride that speeds healing. It is a simple treatment procedure that reduces infections, requires minimum preparation, is associated with little or no pain, uses limited equipment, and is mobile and highly effective. A trained health professional can carry enough equipment and treatment supplies in a small backpack for an entire day's work. There are a few limitations of the glass ionomer, but the advantages far outweigh the disadvantages.

Short – Medium Term

1. Redefine typology of fluoridation
Classify and prioritize countries according to new guidelines and national programs.
2. Countries without successful fluoridation programs
Implement program with appropriate surveillance, consistent monitoring and effective manpower utilization.
3. Countries with successful fluoridation programs
Consolidate fluoridation programs with appropriate surveillance, consistent monitoring and effective manpower utilization.
4. Support Bolivia, Honduras, Nicaragua and Paraguay into full implementation of fluoridation programs.
5. Support Canada, Chile, Cuba Dominican Republic Ecuador, Mexico, Panama, El Salvador, Peru, and the English speaking Caribbean into full consolidation of fluoridation programs.

Long Term

6. Full consolidation

Best Practice Models

Salt: Costa Rica, Jamaica, Mexico, Uruguay
Water: Chile, USA

Special Considerations

Dental Fluorosis, (hyper calcification of the enamel), is being addressed in fluoridation programs and surveillance is necessary. Special funds are to be set aside in programs for this activity.

A detailed outline with a tentative timeline for the operational plan of the strategy document can be found in Annex 2.

Partners

Health programs that use salt as an intervention strategy, e.g. iodine and DEC programs. PAHO, Kellogg, Rotary, Salt Industry, NGO's e.g.: CARE, HOPE.

This strategy document has been prepared to address the persistent and changing oral health challenges for the new millennium. The ultimate goal of this strategy is to reduce the burden of disease from various oral health conditions by the year 2015. The proposed targets of this plan are to reduce the current DMFT-12 for all countries, improve assessment and treatment of other oral health problems in the Region, and increase access to oral health services for every individual. This strategy was designed to build on best practice models used in the successes of the fluoridation programs from the past ten years. These targets can be accomplished by an amalgamated health system that combines oral health with general health services; they must strive for a common oral health agenda for private and public dental health providers and rely on strong partnerships at all levels of the health care delivery system. Improving the oral health status of the Americas will contribute to reaching the MDGs and towards overall global development.

Annex 1

Sample Oral Self-Exam

The infographic is set against a dark blue background with a faint anatomical diagram of a human head in profile. It features eight numbered steps, each with a small icon of a person with a toothbrush and a corresponding photograph of an elderly woman demonstrating the step. The steps are:

- 1** Wash your hands and place in front of a mirror.
- 2** Observe and palpate both lips, inside and outside.
- 3** Observe and palpate your teeth and gums, all the sides thereof.
- 4** Observe and palpate the interior face of your cheeks.
- 5** Observe and palpate all the faces of your tongue, pull your tongue to both sides and watch the side edges.
- 6** Observe and palpate the bottom of your mouth (under the tongue).
- 7** Observe and palpate your palate.
- 8** Observe and palpate the bottom of your mouth (under the tongue).

Sample oral self-exam provided by Ministry of Health, Mexico.

Annex 2

Project Activities and Timeline

<u>Activity</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>
Objective 1: To improve equity of oral healthcare services for vulnerable groups through the implementation of improved public health polices and practices.			
Sub-component 1: Identify vulnerable groups according to guidelines set forth by both the country and PAHO.	→		→
Assess geographic vulnerability including DMFT scores, indicators of oral health needs of vulnerable groups, and availability of oral health services	→		
Assess cultural and social vulnerability through indicators of socio-economic status, gender, age, education, etc.	→	→	
Assess concurrent disease risk factors through indicators of overall health, HIV exposure, diabetes, nutrition, etc.	→	→	
Subcomponent 2: Identify oral health needs of vulnerable groups according to country assessment	→		→
Assess the penetration of previous oral health campaigns and the marketing of oral health practices	→	→	
Analyze country indicators to assess percent of population without access to oral care	→	→	
Work with countries in the identification of areas and population groups with no access to care.	→		→
Subcomponent 3: Design, develop, and implement an appropriate pilot intervention based on age group and oral health needs	→		→
In coordination with country offices and partners, select an area or country for intervention	→		
Develop a segmented intervention model, which offers a basic prevention package by age groups and oral health needs	→	→	
Develop strategies for reaching school children, pregnant women, and older adults (vulnerable groups)	→		→
Test innovative strategies that address the unique needs of different age groups	→		→
Monitor and evaluate the pilot projects closely for necessary adjustments/changes			→
Select and Disseminate Best Practice Models for replication, scale-up, and promotion of supportive policies			→
Objective 2: To integrate oral health care into primary health care services.			
Subcomponent 1: Integration of the structural and administrative aspects of Oral Health programs into the general health programs in the Ministries of Health	→		→
Strengthen and establish national dental chief officer (DCO) positions empowered with decision-making power on both policy and budgetary allocations in the MOH	→		→
<u>Activity</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>

Promote the establishment of country network of dental officers at central and provincial levels			→
Establish a regional PAHO network of Chief Dental Officers			→
Develop strategies and mechanisms for the delivery of oral health services at the provincial and national levels (i.e., community health programs or ongoing national/regional programs)			→
Identify/create and disseminate best practice models of public policy and policy formation tools for critical disease identification and control			
Subcomponent 2: Integrate oral health in the operational aspects of health delivery and promotions and primary health care	→		
Promote the linkages of oral health to general health			→
Develop and implement a framework of provision of basic oral health care packages in primary healthcare services delivery			→
Identify or create various best practice models of integrating oral health into Primary Health Care delivery in the region, keeping in mind the different types of health systems			→
Increase collaboration with dental and medical institutions, government and non-government agencies, and the private sector			→
Objective 3: To continue progress in areas including preventive programs, surveillance, effective utilization of manpower, and transfer of information and technology.			
Sub-component 1: Advancing Proven Successes In Health: Fluoridation			→
Redefine country typology to classify fluoridation status	→		
Classify and prioritize countries according to new guidelines and existence of national programs		→	
In countries without successful programs: implement fluoridation programs with appropriate surveillance, consistent monitoring, and effective manpower utilization.			→
In countries with successful programs, consolidate fluoridation programs with appropriate surveillance, consistent monitoring, and effective manpower utilization.			→
Support Bolivia, Honduras, Nicaragua and Paraguay into full implementation of fluoridation programs.			→
Support the consolidation of fluoridation programs in Canada, Chile, Cuba Dominican Republic Ecuador, Mexico, Panama, El Salvador, Peru, and the English speaking Caribbean.			→
Subcomponent 2: Promote and support new innovations and strategies for models of oral health delivery including new technologies and best practices			→
Define appropriate best practice in basic models of delivery services	→		
Promote the role of dental health care providers in the early diagnosis of HIV through oral manifestations of AIDS and saliva tests at the entry point level			→
Promote ART as a standard modality of restorative treatment throughout the region.			→
Monitoring and Evaluation			→
Data Collection for Monitoring and Evaluation efforts			→
Mid-Term Progress Report			
Final Program Evaluation and Report			→

Annex 3

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