



PAN AMERICAN HEALTH ORGANIZATION  
WORLD HEALTH ORGANIZATION



## 47th DIRECTING COUNCIL 58th SESSION OF THE REGIONAL COMMITTEE

Washington, D.C., USA, 25-29 September 2006

*Provisional Agenda Item 4.7*

CD47/14 (Eng.)  
14 August 2006  
ORIGINAL: ENGLISH

### PROPOSED 10-YEAR REGIONAL PLAN ON ORAL HEALTH

Oral health continues to be a critical aspect of the general health conditions in the Latin American and Caribbean region because of its weight in the global burden of disease, its associated treatment costs, and the potential for effective prevention. The strategy presented to the Directing Council in 1997 (Document CD40/20) emphasized oral disease prevention by ensuring comprehensive oral health programs, strengthening country capacity and pursuing sustainable oral health interventions for the majority of the 38 Member States.

Since 1995, 40 national oral health surveys have been conducted in the Region. This data indicates a marked 35% to 85% decline in the prevalence of dental caries. However, the burden of oral disease is severe and remains high as compared with other Regions in the world. Poor and inequitable health care, the changing pattern of oral disease, increased cost and less investment in dental public health programs are prominent signs of the ongoing health crisis in the Americas. Strong scientific evidence suggests the interrelationship between oral health and general health, particularly the associations between oral infections and diabetes, aspiration pneumonias, and adverse pregnancy outcomes. Common risk factors also exist between oral and chronic diseases, like diabetes, heart disease, and stroke.

This strategy document has been prepared to address the persistent and dynamic 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 (decayed/missing/filled teeth for 12-year old children) 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 10 years. Similar cost-effective intervention using simple technologies can be scaled up to improve access to oral health care at a much lower cost. The targets can be accomplished by an integrated health system that combines oral health with general health services. A common oral health agenda requires strong partnership between the private and public dental health community. Promoting and improving the oral health status of the Americas will contribute to reaching the Millennium Development Goals and towards overall global development.

The Directing Council is invited to consider the resolution proposed by the Executive Committee (Annex D), as well as the operational Plan (Annex B) and proposed budget (Annex C).

## CONTENTS

	<i>Page</i>
Introduction.....	3
Barriers to Oral Health.....	6
Evidence on Links between Oral Health and Systemic Disease.....	6
Strategy and Plan of Action (2005-2015) .....	7
PAHO’s Plan of Action: Goals, Measurable Objectives, Indicators and Activities .....	8
Goal 1. Completion of the Unfinished Agenda in Oral Health. “To ensure a minimum level of access to oral health care for all, by addressing gaps in care for the most vulnerable groups.”.....	8
Goal 2. The Integration of Oral Health Care into Primary Health Care (PHC) Services.....	11
Goal 3. Scaling-Up of Proven cost-effective Interventions—Multiyear Plan for Fluoridation Programs in the Americas and Expansion of Oral Health Coverage with Simple Technologies .....	13
Action by the Directing Council .....	15
References	
Annexes:	
Annex A: Comprehensive Framework for Progression of Oral Health Care	
Annex B: Operational Plan	
Annex C: PAHO's Oral Health Budget by Biennium	
Annex D: Resolution CE138.R9	

## Introduction

1. Disease prevention is the cornerstone of PAHO's oral health policy for the Region of the Americas. The policies, tools, and training provided by PAHO to Member States resulted in a significant caries reduction throughout the Region. These improvements can largely be attributed to national preventive programs including water and salt fluoridation, greater awareness of proper oral hygiene, and better oral health care practices [1, 2, 3, 4, 5, 6, 7, 8, 9, 10].

2. Technical cooperation was provided to measure the progress of countries along an oral health continuum using DMFT-12 scores since the early 1990s.<sup>1</sup> The DMFT score was used due to its availability, ease of measurement and reliable cross-country comparisons. Typology used to indicate the DMFT profile was divided into three stages corresponding to the severity of dental caries:

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

3. PAHO's classification system led to several developments, most notably the implementation of a wide-reaching salt and water fluoridation program in the Region. The fluoridation plan launched by PAHO called for country baseline studies. Over 40 national oral health surveys were conducted to assess DMFT and exposure to fluoride, cost-benefit analysis, epidemiological surveillance systems for fluoridation, technology transfer, and evaluation and tracking systems to determine effectiveness of national fluoridation programs. Over the interval of the past 10 years, PAHO's technical cooperation has aimed to move countries that have high levels of disease and that lack appropriate preventive policies toward effective policies and improved status indicators. Fluoridation programs are in place in over 25 countries and over 350 million individuals have access to fluoride programs in the Americas. It is projected that more than 430 million individuals will have access to fluoridation programs by the year 2010.

4. Country progress on DMFT scores, seen in Tables 1 and 2, resulted in a 35% to 85% caries reduction. This demonstrates a significant shift in the epidemiological profile of dental caries throughout the Region (Figure 1). The shift in the typology table is a

---

<sup>1</sup> DMFT (decayed, missing or filled teeth) 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.

testament to the efficacy of the proven successes in best practice models, including its status as a model case study in *Millions Saved: Proven Successes in Global Health* (Case No. 16)<sup>11</sup>, and the first ever scientific book on salt fluoridation, *Promoting Oral Health: The Use of Salt Fluoridation to Prevent Dental Caries*.<sup>12</sup>

**Table 1: Typology Table in Oral Health, circa 1996**

<b>Emergent DMFT &gt; 5 9 countries</b>	<b>Growth DMFT 3-5 15 countries</b>	<b>Consolidation DMFT &lt; 3 8 countries</b>
Belize Dominican Republic El Salvador Guatemala Haiti Honduras Nicaragua Paraguay Peru	Argentina Brazil Bolivia Chile Colombia Costa Rica Ecuador Mexico Panama Puerto Rico Peru Suriname Trinidad and Tobago Uruguay Venezuela	Bahamas Bermuda Canada Cuba Guyana Jamaica Dominica United States of America

Source: PAHO Scientific and Technical Publication No. 615.

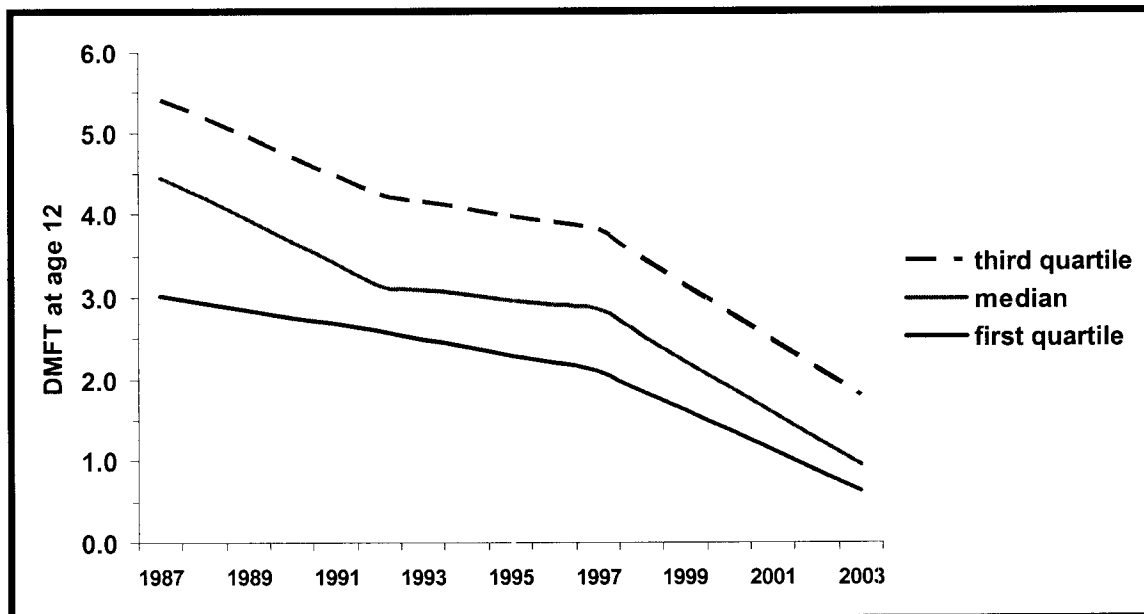
**Table 2: Typology Table in Oral Health, circa 2005**

<b>Emerging DMFT &gt; 5 2 countries</b>	<b>Growth DMFT 3-5 7 countries</b>	<b>Consolidation DMFT &lt; 3 29 countries</b>	
Guatemala St. Lucia	Argentina Bolivia Chile Dominican Republic Honduras Panama Paraguay	Anguilla 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  Turks and Caicos Uruguay United States of America Venezuela

Source: PAHO Scientific and Technical Publication No. 615.

Figure 1

**Trends in DMFT scores at age 12 for  
Latin America and Caribbean Region 1987-2003**



Source: PAHO Area of Technology and Health Services Delivery, 2005.

5. PAHO has also developed a best practice model to improve access to oral health by using simple technologies. In cooperation with the Inter-American Development Bank, clinical trials in three Latin American countries demonstrate the cost-effectiveness of PRAT (Atraumatic Restorative Treatment) for caries treatment and prevention in comparison with conventional methods. The implementation of PRAT requires minimal training and resources and can be implemented by trained auxiliary personnel at one-third of the cost. This best practice model can be used to scale up access to basic oral health services for vulnerable populations.

6. The purpose of this document is to outline the 10-year oral health strategy and plan of action (2005-2015) 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 of 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.

7. 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 at meetings such as the 2004 DCO meeting in Cuba, the 2005 Task Force meeting in Washington, D.C., and the 2005 DCO meeting in Canada. 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.

### **Barriers to Oral Health**

8. Despite these dramatic improvements, the burden of disease is severe and remains high in certain geographic areas and high risk populations. Barriers that prevent equitable oral health care to reach all populations include, but are not limited to, the following:

- Policy support and legislation
- Escalating cost of dental care<sup>13</sup>
- Limited awareness of the importance of oral health
- Inequitable access to oral health care services, especially for vulnerable groups such as women, children, indigenous, physically disabled, and elderly
- Cultural, gender, and other social barriers
- Poor quality oral health care

9. Interventions targeted at reducing these disparities must identify disadvantaged groups; assess their needs in order to develop successful and sustainable interventions.

### **Evidence on Links between Oral Health and Systemic Disease**

10. Early manifestations of systemic origin can often be initially observed in the oral cavity.<sup>14</sup> Risk factors for systemic disease frequently coexist and interact with oral disease. Oral disease has been associated with cardiovascular disease, diabetes, aspiration pneumonias and stroke. Strong evidence demonstrates that maternal oral infection may play a key role in the development of low birth weight (LBW) babies as has been demonstrated in trials from the Latin American and Caribbean region.<sup>15,16,17</sup> The oral cavity is also the first place that critical diseases can be diagnosed. 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 sexually transmitted diseases can be detected through regular oral examinations. The strong correlation between several oral diseases and noncommunicable chronic diseases is primarily a result of the common risk factors.

### **Strategy and Plan of Action (2005-2015)**

11. This strategy includes intersectoral actions and interprogrammatic coordination in achieving optimal oral health outcomes for the next 10 years. It is based on the driving principals of public health which are: disease prevention, health promotion, and disease surveillance. Each element of the strategy is grounded in best practice training and dissemination of best practice models, partnerships, upstream investment, and measurement of progress along time and scale.

12. Improved oral health care is consistent with PAHO's promotion of the 1977 health-for-all agenda that advocates health equity, and with the 2000 Millennium Development Goals (MDGs) advocating overall global development. To that end, the strategy was developed in accordance with the United Nation's Development Agenda, and supports the three MDGs related to health. It focuses on improving maternal and child health by addressing vulnerable groups, and combating HIV/AIDS and other diseases by leveraging oral health to promote general health. Additionally, the strategy emphasizes the functional integration of oral health into diagnostic primary health care. Increasing country capacity is critical in order to advance national oral health development and foster social protection between and within countries.

13. Each goal of the strategy addresses the three principal health challenges in the Region and falls within the PAHO framework of technical cooperation:

- (a) **Completion of the 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 (children, pregnant women, elderly, people with disabilities, HIV/AIDS, and indigenous).
- (b) **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 nongovernmental agencies, the private sector, and dental and medical institutions.
- (c) **Scaling-up of proven interventions** – Maintenance and improvement of current preventive programs; continued surveillance; effective utilization and application of health care resources; and the transfer of information and technology.

14. This strategy depends on a scientific benchmarking system to mark the progress in oral health for all populations within each country. It is based on public health policy with emphasis on oral health as part of the primary health care (PHC) services, integrating appropriate technologies with the support of private providers, dental public health

programs, institutional centers, nongovernmental organizations (NGOs), and others. This new focus on measuring advancements seeks to herald in and promote positive change in our Region.

### **PAHO's Plan of Action: Goals, Measurable Objectives, Indicators and Activities**

15. PAHO is committed to implementing an integrated and science-based approach to improve oral health. The overall strategy is based on shared responsibility among the Secretariat, Member States, and partnerships within the sectors of government and beyond, such as the private sector. The strategy to achieve these goals, which focuses on improving general health by improving oral health, making use of evidence and best practice models, and introducing innovative technologies. The integration of oral health and primary health care systems is a major component of the strategy.

16. To meet the three proposed goals, PAHO submits the following Plan of Action.

***Goal 1. Completion of the Unfinished Agenda in Oral Health. "To ensure an essential and basic level of access to oral health care for all, by addressing gaps in care for the most vulnerable groups."***

17. Despite the advances in reducing DMFT scores in the last ten years, scores vary greatly within and between countries. 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 lack of awareness of the importance of oral health. *Those who suffer the worst oral health are found among the poor of all ages, with poor children and elderly particularly vulnerable.*<sup>18</sup>

18. PAHO will provide technical cooperation to countries to identify vulnerable groups based on a needs-assessment for oral diseases. Using this information, efforts will be made to strengthen national capacity to improve the oral health for those groups at the low end of achievement. Special emphasis will be placed on key and priority countries. A basic health package will include a minimum level of oral health care. A framework will be used as a benchmarking tool to understand the current oral health services status by population to gauge and measure progress (Annex A).

*Objective 1. Reduce Oral Infections among Vulnerable Groups*



19. Emphasis will be placed on key and priority countries. DMFT scores indicate large discrepancies among these countries (Bolivia 4.6; Ecuador 2.9; Guatemala 5.2; Guyana 1.3; Haiti 1.0; Honduras 4.0; Nicaragua 1.8; Paraguay 3.8; Saint Lucia 6.0). Large differences in other oral diseases may also exist within these countries. To reduce the burden of oral diseases, a needs assessment is necessary to include periodontal disease, oral HIV lesions, oro-facial trauma, dental fluorosis, and oral cancer.

*Objective 2. Increase Access to Oral Health Care for Vulnerable Groups*

20. 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. These actions should be integrated through the primary health care approach, proposed in Goal 2. Basic oral health assessment within primary care should be available to all individuals. Emphasis also will be placed on needs-assessment for DMFT and oral diseases, and priority groups will be those who are at the low end of achievement.

*Measurable Objectives and Indicators*

*Short Term: One-to-Two Years*

*Objective:* Identify vulnerable groups according to guidelines set forth by both the country and PAHO.

- *Indicator:* DMFT scores.
- *Indicator:* Country registries of vulnerable groups, including HIV/AIDs, pregnancy, cancer, and diabetes.

*Objective:* Identify oral health needs of vulnerable groups, with emphasis on key and priority countries according to country assessment.

- *Indicator:* Oral health indicators other than DMFT—periodontal disease, HIV-associated lesions, dental fluorosis, oral cancer, trauma, birth defects.
- *Indicator:* Oral health services—KAP surveys.

*Objective:* Design, develop, and implement appropriate pilot interventions for vulnerable groups accordingly, using already existing successful programs.

- *Indicator:* Intervention model available.

*Medium Term: Three-to-Five Years*

*Objective:* Select and disseminate best practice models.

- *Indicator:* Scale-up of best practice models.

- *Indicator: Legislation for public policy available.*

*Long Term: Six-to-Ten Years*

*Objective:* Scale up best practice models in the Region.

- *Indicator:* Number of best practice models in the Region.

*Best Practice Models and Measurement of Progress*

21. Most oral diseases are preventable. Simple education and health education can increase oral health awareness and improve oral hygiene. 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 by population-based interventions.
- Health education 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.

*Replication of Best Practices to Implement Goals*

22. Cost-effective interventions ensure oral health services to the most vulnerable groups. Selected successful programs and initiatives are listed below:

- Implementation of simple technologies (PRAT) as a school-based program.
- Promotion of school-based tooth brushing with full involvement of the private sector as donors/promoters.
- Expansion of the healthy schools program to include caries-free schools.
- Elimination of sodas in vending machines in school settings.

*Special Considerations*

23. The definition of vulnerable groups is still under 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. This process involves a full integration of oral health and primary health care to build on already existing programs.

24. The implementation of this strategy will require an interprogrammatic approach within PAHO and ministries of health. Partners within the private sector may include

dental schools, dental supply companies, dental associations, research institutions, and NGOs.

***Goal 2. The Integration of Oral Health Care into Primary Health Care (PHC) Services***

25. Prevention strategies should focus on reducing oral diseases. Integrating oral health into primary health care services, improving the equity of care, and maintaining successful preventive oral health care programs requires a multidisciplinary approach.

26. Integration of oral health into primary health care strategies will leverage progress towards improving maternal and child health and HIV/AIDS in the MDGs. All have direct implications for oral health. Oral health must be incorporated into a common risk factor approach. A broader definition of oral health will have important implications on the provision of care. Furthermore, integrating oral and primary health care will require a strong public health policy that strengthens existing oral health programs in the ministries of health, as well as the promotion of legislation that will support a full integration of oral health and primary health care. In addition, the integration of oral health care and primary health care will require the full participation of auxiliary personnel for the delivery of oral health services.

*Objective 1. Integrate Oral Health Programs into the PHC Strategy*

27. Past agendas have not effectively addressed the functional absorption of oral health care into primary health care services. This regional strategy, however, orients its approach towards integrating oral health care as a primary sister strategy of primary care due to the importance of oral care as both a preventive 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, dental schools, and the private sector. The transfer of knowledge, information, and best practice models is feasible through networks. Emphasis will be placed in every country.

*Measurable Objectives and Indicators*

*Short Term – One-to-Two Years*

*Objective:* Establish Dental Chief Officer (DCO) network with an appropriate information system to transfer information among countries.

- *Indicator:* Functioning network of DCOs available in countries.

*Objective:* Incorporate oral health component in prenatal programs.

- *Indicator:* National prenatal programs with oral health component incorporated.
- *Indicator:* A cost-effective pilot project to treat oral infection in pregnant women.

*Objective:* Develop mechanisms to integrate oral health programs within current/ongoing PHC services (i.e., community health centers, ongoing national/regional programs) specific to country health needs and resources with emphasis on and awareness of the linkages between oral and general health.

- *Indicator:* Number of countries with primary health care programs with oral health care component.
- *Indicator:* Number of best practice models disseminated.

#### *Medium Term – Three-to- Five Years*

*Objective:* Scale up public best practice models for LBW and oral health and PHC and oral health.

- *Indicator:* Number of countries with functional programs.

*Objective:* Promote capacity building with dental and medical institutions, government and nongovernmental agencies, and the private sector to integrate best practice models.

- *Indicator:* Number of institutions, NGOs, and others disseminating best practice models.

#### *Long Term – Six-to-Ten Years*

*Objective:* To fully integrate oral health care into the health care process and ensure full participation of oral health care providers in the delivery of oral health in PHC.

- *Indicator:* Number of countries with institutional policy.

*Objective:* Integrate best practice models within the primary health care setting.

- *Indicator:* Number of institutions, NGOs and others disseminating best practice models.

#### *Special Considerations*

28. A needs-assessment based on risk factors is needed to provide evidence to support further integration of oral health and primary health care. 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 resistance to change within the dental profession and that training and education for dental and nondental health care professionals will be a critical first step within each of the tactics of this objective.

29. The implementation of this strategy will require an interprogrammatic approach within PAHO and ministries of health. Partners within the private sector may include dental supply companies, dental schools and associations, research institutions, and NGOs.

***Goal 3. Scaling-Up of Proven cost-effective Interventions—Multiyear Plan for Fluoridation Programs in the Americas and Expansion of Oral Health Coverage with Simple Technologies***

30. Over the past 10 years, PAHO has focused the bulk of its technical cooperation on providing best practice policy and implementation to the Region to promote salt and water fluoridation. As a result, the majority of countries have established policies and an infrastructure that allows for optimal fluoridation. Country policies have been guided and established to strengthen country capacity to ensure that these programs become self-sustaining.

31. 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 Tables 1 and 2 and Figure 1, as reported officially by the countries. These programs have saved millions of dollars in treatment costs associated with dental decay and 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.<sup>19</sup> The scaling-up and consolidation of fluoridation programs will be aimed at all countries, with emphasis on key and priority countries.

*Objective 1. To Strengthen Country Capacity to Enable Scaling-Up of Fluoridation Programs*

32. Legal and regulatory procedures are necessary to strengthen fluoride policy at the country level to ensure sustainability and quality of programs. Monitoring and surveillance systems are critical to maintain appropriate effective and safe fluoride levels for the community. Knowledge and experience from more mature programs will be transferred to build country capacity within the Region.

*Objective 2. To Scale Up Oral Health Coverage Using Cost-Effective and Simple Technologies, PRAT*

33. With the high burden of disease and poor access to health care, innovations are necessary to treat and prevent dental caries. Traditional treatment is expensive. Results from proven cost-effective interventions indicate that:

- PRAT, provided at the lowest cost service modality, produces acceptable outcomes.
- PRAT can use already existing human resources
- PRAT as a best practice model provides a framework to implement oral health services on a large scale and will reduce the inequities related to access to care services.
- The study has produced evidence to guide downstream investment to improve equity, efficiency, and quality of life in the Americas.<sup>20</sup>

#### *Measurable Objectives and Indicators*

##### *Short – Medium Term*

*Objective:* Support Bolivia, Ecuador, Guatemala, Haiti, Honduras, Nicaragua, Paraguay and Saint Lucia to reach full implementation of fluoridation programs.

- *Indicator:* Number of countries with fluoridation programs.

*Objective:* Consolidate fluoridation programs with appropriate surveillance, consistent monitoring, and effective manpower utilization in countries with already existing fluoridation programs. Belize, Canada, Chile, Cuba, Dominican Republic, Ecuador, El Salvador, Mexico, Panama, Peru, and Trinidad and Tobago to reach full consolidation of fluoridation programs.

- *Indicator:* Number of countries with consolidated programs.

*Objective:* Expand best practice models (PRAT) to increase coverage of oral health services with emphasis on key and priority countries.

- *Indicator:* Number of best practice models.

##### *Long Term*

*Objective:* Achieve full consolidation of fluoridation programs.

- *Indicator:* All countries by 2015 with fluoridation programs.

#### *Best Practice Models and Measurement of Progress*

34. 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.

35. PRAT, at the lowest cost service modality, produces acceptable outcomes as a best practice model and provides a framework to implement at large-scale oral health services; additionally, it will reduce inequities in access to oral health care services.

#### *Special Considerations*

36. The risk of dental fluorosis (hypercalcification of the enamel) is being addressed in fluoridation programs, and ongoing surveillance is necessary. Special funds are to be set aside in programs for the design of defluoridation systems for regions where is required.

37. The implementation of this strategy will require an interprogrammatic approach within PAHO and ministries of health. Partners within the private sector, such as dental schools, Foundations, the Salt Industry, and other NGOs, may include health programs that use salt as an intervention strategy (e.g. iodine and diethylcarbamazine (DEC) programs).

38. The next 10 years will not only build on these successes in health promotion, 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.

#### **Action by the Directing**

39. The Directing Council is invited to consider the resolution proposed by the Executive Committee (Annex D), as well as the operational plan (Annex B) and proposed budget (Annex C).

#### References

## REFERENCES

- 1 Estupiñán-Day S. Promoting Oral Health: The Use of Salt Fluoridation to Prevent Dental Caries. Pan American Health Organization, Scientific and Technical Publication No. 615, Washington, D.C., PAHO, 2005. Reviewed by John J. Warren, DDS, MS. *Journal of Public Health Dentistry*, 2006.
- 2 Estupiñán-Day S, Baez R., Horowitz H, Warpeha R, Sutherland B, Thamer M. 2001. Salt Fluoridation and Dental Caries in Jamaica. *Community Dentistry and Oral Epidemiology*. 29: 247-252.
- 3 Estupiñán-Day S. Overview of Salt Fluoridation in the Region of the Americas, Part I: Strategies, Cost-Benefit Analysis, and Legal Mechanisms Utilized in the National Programs of Salt Fluoridation: *Salt 2000, 8<sup>th</sup> World Salt Symposium* 2000; 2: 983-988.
- 4 Estupiñán-Day S, Baez R, Sutherland B, Horowitz H, Warpeha R, Marthaler T. 1996. Impact of Salt Fluoridation in Preventing Caries in Jamaica. *J Dent Res* 75 (IADR Abstract 997).
- 5 Estupiñán-Day S. Improving Oral Health in Latin America. *Oral Care Report/Harvard* 1999. 9(3). 1999.
- 6 Estupiñán-Day S. International Perspectives and Practical Applications on Fluorides and Fluoridation. *Journal of Public Health Dentistry* 2004; 40-43.
- 7 Milner T, Estupiñán-Day S. Overview of Salt Fluoridation in the Region of the Americas. Part II: The Status of Salt Production, Quality and Marketing and the State of Technology Development for Salt Fluoridation. In: Geertman, RM, Editor. *Salt 2000, 8th World Salt Symposium*. Amsterdam: Elsevier Science, 2000: 1033-8.
- 8 Beltrán-Aguilar ED, Estupiñán-Day S. Analysis of Prevalence and Trends of Dental Caries in the Americas between the 1970s and 1990s. *International Dental Journal*. 1999; 49:322-329.
- 9 Petersen Poul E, Estupiñán-Day S, Ndiaye C. WHO's action for continuous improvement in oral health. *Bulletin of the World Health Organization*, September 2005, 83(9): 642.
- 10 Estupiñán-Day S, Case 16: Preventing Dental Caries in Jamaica. *Millions Saved: Proven Successes in Global Health*. Center for Global Development, November 2004: 137-140.



- 11 Levine R. *Millions Saved: Proven Successes in Global Health*. Washington, DC: Center for Global Development, 2004, pp. 137-140.
- 12 Estupiñán-Day S. Promoting Oral Health: The Use of Salt Fluoridation to Prevent Dental Caries. 2005. Op. cit.
- 13 World Health Organization. Selected Publication: The World Oral Health Report 2003. Geneva: World Health Organization, 2003.
- 14 Estupiñán-Day, S. International Perspectives and Practical Applications on Fluorides and Fluoridation. 2004. Op. cit.
- 15 Lopez NJ, Smith PC, Gutierrez J. Higher risk of preterm birth and low birth weight in women with periodontal disease. *J Dent Res*. 2002, 81:58-63.
- 16 Lopez NJ, Smith PC, Gutierrez J. Periodontal therapy may reduce the risk of preterm low birth weight in women with periodontal disease: a randomized controlled trial. *J Periodontol*. 2002, 73:911-924.
- 17 Lopez NJ, Da S, I, Ipinza J, Gutierrez, J. Periodontal therapy reduces the rate of preterm low birth weight in women with pregnancy-associated gingivitis. *J Periodontol*. 2005, 76:2144-2153.
- 18 U.S. Department of Health and Human Services. *Oral Health in America: A Report of the Surgeon General*. Rockville, MD: U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health, 2000.
- 19 Estupiñán-Day S. Promoting Oral Health: The Use of Salt Fluoridation to Prevent Dental Caries. 2005. Op. cit..
- 20 Pan American Health Organization “Oral Health of Low Income Children: Procedures For Atraumatic Restorative Treatment (PRAT)” ATN/JF-7025-RG, Project Number 091024, Final Report, May 2006.

## Comprehensive Framework for Progression of Oral Health Care

This framework serves as a benchmark 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 Promotion: Targeted

Media Linkages and Groups

NGOs

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

Academic Institutions

Private Sector

### 2. Specific Prevention

Sealant Programs

Conventional

ART (spell out with (acronym))

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 on toothbrush use	☺	☺	☺	☺
Instruction on dental floss use	☺	☺	☺	☺
Self-application of fluoride	☺			
Self exam	☺ Incl. cancer	☺ 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.

**PAHO'S Technical Cooperation Plan**

Activity	2006-2007	2008-2009	2010-2011
<b>Goal 1: To ensure a minimum level of access to oral health care for all, by addressing gaps in care for the most vulnerable groups.</b>			
<b>Subcomponent 1:</b> 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 concurrent disease risk factors through indicators of overall health, HIV exposure, diabetes, nutrition, cancer, pregnancy.	→	→	
<b>Subcomponent 2:</b> 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 the percent of population without access to oral care.	→		→
Work with countries in the identification of areas and population groups with no access to care.	→		→
<b>Subcomponent 3:</b> Design, develop, and implement an appropriate pilot intervention based on age group and oral health needs, using already existing programs.	→		→
In coordination with country offices dental schools and partners, select an area or country for intervention.	→		
Develop a segmented intervention model, which offers a basic prevention package by age group 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.			→
<b>Goal 2: To integrate oral health care into primary health care services.</b>			
<b>Subcomponent 1:</b> 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 regarding both policy and budgetary allocations in the ministry of health.	→		→

<u>Activity</u>	<u>2006-2007</u>	<u>2008-2009</u>	<u>2010-2011</u>
Promote the establishment of country network of dental officers at central and provincial levels		→	→
Develop cost effective Project to treat oral infections in prenatal care	→		→
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		→	→
<b>Subcomponent 2: Integrate oral health in the operational aspects of health delivery and promotions and primary health care</b>	→		
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	→		→
<b>Goal 3: Scaling-up of proven cost-effective interventions - multiyear plan for fluoridation programs in the Americas and expansion of oral health coverage with simple technologies.</b>			
<b>Sub-component 1: Advancing Proven Successes In Health: Fluoridation</b>	→		→
Redefine country typology to classify fluoridation status	→		
Classify and prioritize countries according to new guidelines and existence of national programs	→	→	
In countries <i>without</i> successful programs: implement fluoridation programs with appropriate surveillance, consistent monitoring, and effective manpower utilization.	→		→
In countries <i>with</i> successful programs, consolidate fluoridation programs with appropriate surveillance, consistent monitoring, and effective manpower utilization.		→	→
Support Bolivia, Honduras, Guatemala, Nicaragua, Paraguay and Saint Lucia 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.		→	→
<b>Subcomponent 2: Promote and support new innovations and strategies for models of oral health delivery including new technologies and best practices</b>	→		→
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 PRAT as a standard modality of restorative treatment throughout the region.				
<b>Monitoring and Evaluation</b>				
Data Collection for Monitoring and Evaluation efforts				
Mid-Term Progress Report				
Final Program Evaluation and Report				

**PAHO's Oral Health Budget by Biennium  
(in US dollars)**

<b>Funding Agencies</b>	<b>2006-2007</b>	<b>2008-2009</b>
PAHO Regular Budget:		
Post	276,000	276,000
Non-Post	100,000	100,000
PAHO Country Support	90,000	90,000
Extrabudgetary	2,000,000	3,000,000
Other institutions support (ministries of health, WHO Collaborating Centers, NIH/NIDCR, Foundations, CDC, and intercountry collaboration)	240,000	240,000
Grand Total	\$ 2,706,000	\$3,706,000



PAN AMERICAN HEALTH ORGANIZATION  
WORLD HEALTH ORGANIZATION



# 138th SESSION OF THE EXECUTIVE COMMITTEE

*Washington, D.C., USA, 19-23 June 2006*

---

CD47/14 (Eng.)  
Annex D

## ***RESOLUTION***

### ***CE138.R9***

#### **PROPOSED 10-YEAR REGIONAL PLAN ON ORAL HEALTH FOR THE AMERICAS**

##### ***THE 138th SESSION OF THE EXECUTIVE COMMITTEE,***

Having reviewed the report on the Proposed 10-Year Regional Plan on Oral Health for the people of the Americas (Document CE138/14),

##### ***RESOLVES:***

To recommend that the Directing Council adopt a resolution along the following lines:

##### ***THE 47th DIRECTING COUNCIL,***

Having considered Document CD47/14 on the Proposed 10-Year Regional Plan on Oral Health for the people of the Americas;

Recognizing that oral health is a critical aspect of general health conditions throughout the Region of the Americas due to its weight in the overall burden of disease, its association with systemic diseases, its causal relationship to the success or failure to meet some of the Millennium Development Goals, and the costs associated with the

treatment of oral health diseases and the ability to institute effective oral health promotion and disease prevention measures; and

Recognizing that PAHO has cooperated with the countries of the Region in laying the conceptual and technical foundations for the development of policies, infrastructure, and programmatic capacities related to the national oral health programs,

***RESOLVES:***

1. To approve the 10-Year Plan on Oral Health for the Americas, and especially support the integration of oral health into the primary care strategy, greater access to care, and the extension and consolidation of successful programs like fluoridation, improving the organization and delivery of services with the support of other actors working in oral health, such as the private sector, universities, and industry.
2. To urge the Member States to:
  - (a) make every possible effort to ensure a basic level of access to oral health care, with emphasis on vulnerable groups;
  - (b) improve oral health programs, establishing public policies in oral health and promoting partnerships with other sectors and areas for the development of oral health programs;
  - (c) design and implement effective interventions, as well as best practice models and successful programs used in other countries, introducing cost-effective technologies that will facilitate greater access to health services, with emphasis on vulnerable groups, implementing and/or consolidating fluoridation programs;
  - (d) promote integration of oral health into the primary care strategy, family health, and perinatal health.
3. To request the Director to:
  - (a) support the implementation of the regional oral health strategy;
  - (b) promote technical cooperation among countries and strategic partnerships in activities to promote oral health;
  - (c) promote and facilitate the search for voluntary contributions to strengthen oral health activities.