WORKSHOP ON CARIES PREVENTION FOR COMMUNITIES IN BELIZE

April 20-22, 2010

The George Price Centre for Peace and Development
Belmopan, Belize

Final Report

May 2010

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FINAL WORKSHOP REPORT

CARIES PREVENTION FOR COMMUNITIES IN BELIZE

EXECUTIVE SUMMARY

Oral health means more than good teeth – it is integral to general health and overall well-being. Poor oral health can have a profound effect on the quality of life. Development of sustainable systems to prevent dental caries will improve oral health in all age groups. A multi-disciplinary approach, with the involvement of the community, is necessary for integrating oral health into primary health care services and maintaining successful preventive oral health care programs.

Those who suffer the worse oral health are found among the poor of all ages, with poor children and older persons being particularly vulnerable. Promoting and protecting health and respecting, protecting and fulfilling the right to health are inextricably linked. All health and health-related policies and programs can promote or violate human rights, according to their design or implementation, and oral health is no exception. A focus on the most vulnerable and underserved populations, and involvement of the community in the development and implementation of programs targeting its members are key tenets of the human rights-based approach. The right to health does not mean that everyone must be healthy – since health depends on so many factors, including genetics and personal choices – but that governments must progressively work to put in place conditions in which everyone can be as healthy as possible. Issues such as availability, accessibility, acceptability, and quality of health facilities, goods, and services are critical to the progressive realization of the right to health.

The workshop "*Caries Prevention for Communities in Belize*" was held in Belmopan, Belize from April 20-22, 2010 at The George Price Centre for Peace and Development. The workshop was organized by the Ministry of Health of Belize in collaboration with the Pan American Health Organization/World Health Organization (PAHO/WHO).

Approximately 25 dentists, dental staff and health educators from public health facilities across Belize attended the workshop, which aimed to increase their understanding of best practices to prevent dental caries, with a focus on oral health screening, fluoride varnish for infants and young children, and the promotion of fluoride toothpaste use beginning with eruption of the first primary tooth. Furthermore, participants worked together to develop community-based oral health plans.

Recommendations

In reaching their recommendations, the participants recalled the PAHO Directing Council Document CD47/14 on the Proposed 10-Year Regional Plan on Oral Health for the people of the Americas and its resulting resolution CD47.R12 that urged member states to:

- make every possible effort to ensure a basic level of access to oral health care, with emphasis on vulnerable groups;

- 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;
- 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; and
- promote integration of oral health into the primary care strategy, family health, and perinatal health.

Participants felt that that oral health is a critical aspect of general health conditions in Belize 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.

Furthermore, participants were of the opinion that despite 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; 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; and quality of oral health care. Interventions targeted are reducing these disparities must identify disadvantaged groups; assess their needs in order to develop successful and sustainable interventions.

After participating in the workshop, participants considered the right to health as the right to an effective and integrated health system encompassing oral health care and the underlying determinants of oral health, which is responsive to national and local priorities, and accessible to all. Use of international human rights principles, treaties and standards ratified by Belize is seen as an essential strategy to improve the health of the people in Belize and is therefore an integral dimension of the design, implementation, monitoring and evaluation of oral health-related policies and programmes. As a follow-up to the workshop, participants were encouraged to take PAHO's online course "Basic E-Learning Course on Human Rights and Health" accessible at the following website:

http://www.xceleratemedia.com/TATC/clients/PAHO_9_01_2009/index.html

Participants also recalled that the Belize Ministry of Health "Health Agenda 2007-2011" stated that the Belize Ministry of Health envisions a national health care system which is based upon equity, affordability, accessibility quality and sustainability in effective partnership with all levels of government and the rest of society in order to develop and maintain an environment conducive to good health. As such, participants felt that this vision recognized General Comment 14 that set out four criteria by which to evaluate the right to oral health – availability; accessibility; acceptability; and quality.

The participants made the following recommendations and requested that the Senior Dental Surgeon of the Ministry of Health seek the support of the senior policy decision makers in the Belize Ministry of Health/Belize Government for their implementation:

1. Control the level of fluorides in water and availability of fluoridated salts in selected communities of the Northern Region;

2. Conduct a national DMFT (i.e. DMFT - decayed, missing or filled teeth - is a unit of measurement describing the amount of caries in a population) survey to identify whether there has been a epidemiological shift in dental caries in Belize and to identify disparities in oral health and vulnerable groups affected;

3. Strengthen licensing requirements by the Belize Medical Council for dentists and other accompanying staff visiting Belize to provide dental health services and then to communication granting of privileges to the relevant District Dental Officer;

4. Formalize preceptorship/internship programs for dental students doing practical training in Belize health facilities whether training is provided inside or outside Belize;

5. Define human resources to provide dental services in the primary care settings in each health region and train/retrain/recruit human resources accordingly;

6. Develop, implement and monitor the implementation of oral health protocols, policies, guidelines, SOPs (standard operating procedures);

7. Procure and replace dental equipment as needed ensuring standardization in all dental health clinics in the public sector and ensure implementation of a preventive maintenance program;

8. Strengthen outreach oral health programming to rural areas through mobile clinics (e.g. transportation, portable units, revision of community health worker manual)

9. Include oral health services and professionals within the agenda of the licensing and accreditation process within the Ministry of Health

10. Strengthen integration of oral health into primary health care especially in maternal and child health

11. Strengthen dental health care provision as part of inter-sectoral, integrated delivery systems

12. Train public health personnel on human rights obligations applicable to oral health and other areas

13. Promote inclusion of dental health data in the electronic health records within the Belize Health Information System (BHIS)

14. Include dental health care as an insured benefit in the National Health Insurance Program run by the Social Security Scheme

FINAL WORKSHOP REPORT

CARIES PREVENTION FOR COMMUNITIES IN BELIZE

1. INTRODUCTION

Oral health means more than good teeth – it is integral to general health and overall well-being. Poor oral health can have a profound effect on the quality of life. Development of sustainable systems to prevent dental caries will improve oral health in all age groups. A multi-disciplinary approach, with the involvement of the community, is necessary for integrating oral health into primary health care services and maintaining successful preventive oral health care programs.

Those who suffer the worse oral health are found among the poor of all ages, with poor children and older persons being particularly vulnerable. Promoting and protecting health and respecting, protecting and fulfilling the right to health are inextricably linked. All health and health-related policies and programs can promote or violate human rights, according to their design or implementation, and oral health is no exception. A focus on the most vulnerable and underserved populations, and involvement of the community in the development and implementation of programs targeting its members are key tenets of the human rights-based approach. The right to health does not mean that everyone must be healthy – since health depends on so many factors, including genetics and personal choices – but that governments must progressively work to put in place conditions in which everyone can be as healthy as possible. Issues such as availability, accessibility, acceptability, and quality of health facilities, goods, and services are critical to the progressive realization of the right to health.

The workshop "*Caries Prevention for Communities in Belize*" was held in Belmopan, Belize from April 20-22, 2010 at The George Price Centre for Peace and Development. The workshop was organized by the Ministry of Health of Belize in collaboration with the Pan American Health Organization/World Health Organization (PAHO/WHO).

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2. OPENING CEREMONY

Dr. Sinai

Dr. Leonel Sinai, the Dental Coordinator for the Central Region, Acted as Chair of the Opening Ceremony. Invocation was given by Pastor Lancelot Lewis from Belmopan followed by all participants singing the National Anthem of Belize.

His Workshop Simeon Lopez, Mayor of the City of Belmopan, welcomed participants to the workshop and spoke to the importance of oral health. Dr. Raphael Samos, Senior Dental Surgeon in the Ministry of Health, outlined the following objectives for the workshop.

OBJECTIVES OF THE WORKSHOP

After completing this workshop, participants will be able to:

- Identify pathological and protective factors for dental caries
- Understand the application of international regional human rights instruments to oral health and the links between health and human rights
- List best practices for caries prevention specific to different age groups
- Describe a caries risk analysis for individuals and groups
- Demonstrate an oral health screening for infants and toddlers using the principles of infection control
- Explain appropriate protocols for application of fluoride varnish and ART for each age group
- Describe ways to improve the effectiveness of oral health education
- Develop a community-based oral health plan that includes training parents, teachers, and other community members
- Choose strategies to evaluate the effectiveness of their community-based oral health plans
- Discuss ways to create sustainable systems to support the community-based oral health plans
- Demonstrate use of the training materials and ways to improve training effectiveness

Ms. Marilyn Entwistle, PAHO/WHO Belize Advisor in Health Systems and Services, emphasized that PAHO/WHO was committed to supporting the Ministry of Health in implementing an integrated and evidence-based approach to improving oral health and was pleased to be partnering with the Ministry in this workshop on Caries Prevention for Communities in Belize.

Left to Right: Pastor Lancelot Lewis, Mayor Simeon Lopez, Dr. Raphael Samos, Ms. Marilyn Entwistle, Dr. Peter Allen

Dr. Peter Allen, Chief Executive Officer of the Ministry of Health, reported that oral health is related to Belize's commonest causes of morbidity and is largely preventable. The Ministry recognizes the importance of fluoride and how it can be most effectively used; oral manifestations of disease from diabetes to HIV; the incidence of oral cancers; and the links between good oral health and good general health. As with other lifestyle related illnesses, it is recognized that those who suffer most from poor oral health tend to be from the most vulnerable communities – the poor the children and the elderly. Oral health is important in ageing societies and the increasing numbers of older persons in Belize are noted. Prevention of disease through the development of an integrated approach focusing on primary care strategies and involving communities will pay dividends in many areas – including oral health. The Dental Department of the Ministry of Health has been a leader in Belize in the implementation of such strategies. Dr. Allen emphasized how proud the Ministry of Health is of all members of the dental team for their persistence and professionalism, their commitment to clinics, schools and to the maintenance of outreach services to rural areas.

Dr. Cima

World Health Assembly 2007 Resolution entitled "Oral health: action plan for promotion and integrated prevention" guides PAHO/WHO Member States to the improvement of oral health globally. Greater emphasis is put on developing global policies in oral health promotion and oral disease prevention, coordinated more effectively with other priority programmes and with other partners.

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Dr. Efrain Cima, Dental Surgeon in San Pedro, gave the vote of thanks.

3. OVERVIEW TO CARIES FREE COMMUNITIES INITIATIVE

Ms. Anna Scharfen

Ms. Anna Scharfen, Coordinator of the Caries Free Communities Initiative in PAHO/WHO, made a presentation on this important initiative. Over the last three decades, there has been a shift from emergency care to community programs; the lack of equity is now seen as a health problem; there is a better understanding of prevention and decentralization; and surveys have reported an average DMFT - 12 score of 2.9 for the Region (31 countries less than 3).

There have been lessons learned. Forty-eight national oral health surveys indicate a 35% to 85% decline in the prevalence of dental caries, attributed mostly to cost-effective salt and water fluoridation programs. The burden of oral disease is severe and remains high in certain geographic areas and high-risk populations. Strong scientific evidence suggests associations between oral infections, chronic diseases, and adverse pregnancy outcomes. There are Best Practice Models on prevention and delivery of oral care.

The Caries Free Communities Initiative (CFCI's) eight-year plan represents a widely sustained effort to combat caries in the Americas focusing on vulnerable populations (low socio-economic

groups, marginalized and geographically isolated populations, women, children, and people infected with HIV/AIDS). It was launched in 2009 and its main goal is to reduce the burden of oral disease by 2015 by reducing the number of infections and increasing service coverage. CFCI has three specific goals. Goal 1 is 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 (i.e. the poor of all age groups, socially marginalized, geographically isolated, women and children, HIV/AIDS). Goal 2 is to integrate oral health care in to primary health care services through developing mechanisms to integrate oral health within current primary health care services, incorporate an oral health component into prenatal programs, and scaling up best practice models. Goal 3 is to scale up proven cost effective interventions – multiyear plan for fluoridation programs in the Americas and expansion of oral health coverage with simple technologies.

The following outlines the CFCI's three-phase, action plan.

Phase I

Form partnerships with the public and private sectors to ensure sustainability of the Caries Free Communities Initiative; identify most vulnerable communities

Objectives	Actions	Performance Indicators
Advocate oral care & prevention Multi-organizational alignment is based on building trust Develop initial country-specific interventions	Advocacy from leaders from academia, governments, professional organizations Advocate oral care prevention within network through regional consensus conference, experts' meetings, others Sensitize public health institutions, academia, governments, professional organizations on effort needed to reduce caries for the young (less than 20 years old).	Identification of key experts from public and private sectors for Caries Free Communities. Consensus reached on CFC to reduce caries in the region. Developed jointly with country counterparts CFC in Tier 1 (priority) countries.

Phase II

Implement oral health interventions to reduce caries by 80% in targeted communities by 2014

Objectives	Actions	Performance Indicators
Implement country-specific interventions on a rolling basis Reduce dental caries by 80% in priority communities by 2014	Work closely with MOH, dental schools, dental associations to implement a joint CFC intervention Continually measure caries prevalence in target communities against baseline Develop a set of "lessons learned" from the development of oral care packages for Tier 1 (priority) countries	Oral health intervention implemented in Tier 1 countries Oral health intervention developed jointly with national governments and PAHO in Tier 2 countries Dissemination of results and outcomes

Phase III

Empower national and local health authorities, academic community, and educational associations to organize educational activities for oral health promotion. Train oral health professionals, measure progress, and disseminate results.

Objectives	Actions	Performance Indicators
Empower oral health community in the development of sustainable oral health promotional and educational activities by 2013	Build on educational / communication campaign from Phase I to generate awareness and motivate groups to visit available oral health programs	Evaluation of impact. Oral health interventions adopted by MOHs
Expand existing CFC network	Develop and expand the "train-the-trainer" workshop	Publication of success stories

The first CHCI was held in Panama hosted by the Gorgas Institute, PAHO, the US Department of Health and Human Services, and the Ministry of Health. Chief Dental Officers were trained from Central America (including Belize) and the Dominican Republic. Since that time, workshops were held in St. Kitts-Nevis (the majority of its participants were non-dentists) and in Ecuador – the first country-wide workshops. Future workshops are planned for Bolivia, Guatemala, and Haiti. The workshop in Belize is the first CHCI workshop that is including the human rights law based approach.

4. HUMAN RIGHTS LAW BASED APPROACH TO ORAL HEALTH IN THE CONTEXT OF PAHO'S STRATEGIC PLAN

Mr. Javier Vasquez
PAHO/WHO Human Rights Law Advisor

Mr. Javier Vasquez, Human Rights Law Advisor in PAHO/WHO, stated that the human rights law based approach provides a framework as well as a useful guide for analysis and action. Human rights norms and standards provide important avenues towards increasing accountability for health. The right to the enjoyment of the highest attainable standard of health ("the right to health") means that governments must generate conditions in which everyone can be as healthy as possible**.** Violations of human rights can affect negatively the oral health of individuals, especially of those most vulnerable (women, children, indigenous peoples, persons with disabilities and older persons). Oral health policies, laws, programs and plans can affect positively or negatively the exercise of the basic human rights and freedoms. Enjoyment of oral health and the exercise of human rights are both essential requirements to reach well-being and a healthy life.

Governments decide freely whether or not to become parties to a human rights treaty. Once this decision is made, however, there is a commitment to act in accordance with the provisions of the treaty concerned. Every country in the world is now party to at least one human rights treaty that addresses health-related rights, including the right to health, and a number of rights related to conditions necessary for health such as the right to life and the right to personal integrity, among others. Governments have legal obligations – they must respect human rights and can

not directly or indirectly violate the human rights and fundamental freedoms of individuals and communities (vulnerable persons). Steps towards the full realization of rights must be deliberate, concrete and targeted as clearly as possible towards meeting a government's human rights obligations. All appropriate means, including the adoption of legislative measures and the provision of judicial remedies as well as administrative, financial, educational and social measures, must be used in this regard. This neither requires nor precludes any particular form of government or economic system being used as the vehicle for the steps in question. The principle of *progressive realization* of human rights imposes an obligation to move as expeditiously and effectively as possible towards that goal. All countries are required to show constant progress in moving towards full realization of rights. However, there are several human rights related to health that are not subject to a progressive realization but rather require immediate compliance with measures to protect them.

Declarations are non-binding, although many norms and standards enshrined therein reflect principles which are binding in customary international law. United Nations conferences generate nonbinding consensual policy documents, such as declarations and programmes of action. The Declarations and Programmes of Action from United Nations world conferences provide guidance on some of the policy implications of meeting government's human rights obligations. Annex 2 provides relevant human rights instruments ratified by Belize that can be applied in the reform of health systems (including oral health).

A video was shown where Dr. Mirta Roses, Director of the Pan American Health Organization (PAHO), said in October 2006 at the Georgetown Law Center that "the use of international human rights principles, treaties and standards is seen in PAHO and the World Health Organization not as an optional tool to promote and protect public health, but as an essential strategy to improve the health of the people around the world". The Director of PAHO referred to the right to health as enshrined in the WHO Constitution, the Health Agenda for the Americas (2008-2017) and PAHO Strategic Plan 2008-2012.

> ***"The right to health can be understood as the right to effective and integrated health system encompassing health care and the underlying determinants of health, which is responsive to national and local priorities, and accessible to all. Underpinned by the right to health, an effective health system is a core social institution, no less than a court system or a political system."***
>
> *The United Nations Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health (2006).*

A rights-based approach to health refers to the processes of: using human rights as a framework for health development; assessing and addressing the human rights implications of any health policy, programme or legislation; and making human rights (as protected by international legal instruments) an integral dimension of the design, implementation, monitoring and evaluation of health-related policies and programmes in all spheres, including political, economic and social.

Human rights may benefit work in the area of public health by providing:

- explicit recognition of the highest attainable standard of health as a .human right. (as opposed to a good or commodity with a charitable construct);
- a tool to enhance health outcomes by using a human rights approach to designing, implementing and evaluating health policies and programmes;
- an empowering. strategy for health which includes vulnerable and marginalized groups engaged as meaningful and active participants;
- a useful framework, vocabulary and form of guidance to identify, analyze and respond to the underlying determinants of health;
- a standard against which to assess the performance of governments in health;
- enhanced governmental and private sector accountability for health; and
- a powerful authoritative basis for advocacy and cooperation with governments; international organizations; international financial institutions; and in the building of partnerships with relevant actors of civil society.

The most relevant human rights in the context of oral health policies, plans and laws are the:

- Right to not to be discriminated against (Lack of access to oral health services for every individual);
- Right to equal protection of the law (Lack of access to preventive measures, treatments, facilities and goods of good quality especially for pregnant women, children, indigenous peoples, persons with disabilities/HIV and older persons);
- Right to personal liberty and security of person (Access to counseling, oral health treatment, medical tests, goods, services and essential medicines in prisons and public health facilities such as psychiatric hospitals);
- Right to privacy (dissemination of private information on health status by health personnel or tribunals);
- Right to life (health services that are unsafe, hospital infections/pain, irrational use of drugs and surgical errors);
- Right to personal integrity (poor quality, limited access to oral health services/oral infections/pain, long waiting lists, clinic hours out of synch with users' schedules, excessively long distances to health centers, lack of essential drugs in health centers and services that are inappropriate to the cultural and social context);
- Freedom of movement and residency (lack of transportation which limits access to oral health services in poor communities)
- Freedom of thought and expression (lack of awareness on oral health and of a wide dissemination of education training, media programs and information on oral health);
- Right to the highest attainable standard of health;
- Right to the benefits of culture which includes the right to enjoy the benefits of scientific and technological progress (lack of access to salt and water fluoridation programs and oral health coverage with simple technologies);
- Right to Education (lack of salt and water fluoridation programs and pain/infections can influence absenteeism from school)
- Right to Work (poor oral health especially pain/infections can influence absenteeism from work)

General Comment 14 sets out four criteria by which to evaluate the right to oral health:

Availability – Functioning public health and oral health-care facilities, goods and services, as well as programmes, have to be available in sufficient quantity.

Accessibility – Health facilities, goods and services on oral health have to be accessible to everyone without discrimination, within the jurisdiction of the State party. Accessibility has four overlapping dimensions: non-discrimination; physical accessibility; economic accessibility (affordability); and information accessibility.

Acceptability – All oral health facilities, goods and services must be respectful of medical ethics and culturally appropriate, sensitive to gender and life-cycle requirements, as well as being designed to respect confidentiality and improve the health status of those concerned.

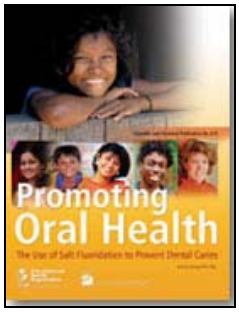
Quality – Oral health facilities, goods and services must be scientifically and medically appropriate and of good quality.

5. THE CARIES BALANCE

Tooth decay is not a simple infection, but rather a process that involves a balancing act between pathological factors and protective factors. Children are not born with the bacteria that cause dental caries. Dental caries is an infectious, transmissible disease caused by mutans streptococci, lactobacilli, and other acid-producing bacteria. While the transmission for the majority of children is primarily vertical between mothers or other primary caregivers and infants, studies have also demonstrated horizontal transmission from infants to infants as well as from older children to infants. Organisms that cause dental caries can begin to colonize in the mouth of an infant even before the eruption of teeth.

Bacteria are called acidogenic because they produce acids from carbohydrates, which causes demineralization of the enamel and eventually, visible tooth decay. The first visible sign of tooth decay or demineralization is a chalky "white spot" lesion. When we look at babies, we are looking for both white and brown spot lesions. The reversal of demineralization is remineralization, which happens when the tooth heals from the calcium and phosphate provided by saliva. This natural tooth repair is enhanced by fluoride if it is present in the mouth, and the renewed fluoride enhanced mineral is more resistant than before to acid from the bacteria. The process of demineralization and remineralization is occurring in most of our mouths as part of our daily eating, snacking and oral hygiene activities.

It is important to rethink the way dental caries is treated – intervening at a stage where disease is prevented or white spot lesions are "treated" with fluoride. Dental caries can be prevented. Through interventions with families, pathological factors can be reduced and protective factors strengthened.



Fluoride is a key factor in the prevention and reduction of tooth decay. Fluoride works by inhibiting demineralization, enhancing remineralization, and inhibiting plaque bacteria. Pan American Health Organization's (PAHO) publication "*Promoting Oral Health: The Use of Salt Fluoridation to Prevent Dental Caries"* shows how salt fluoridation has proven to be one of the most cost-effective public health interventions in history and explains why the practice is better suited to countries in Latin America and the Caribbean than fluoridation of water. .

Fluoride toothpaste is effective at preventing dental caries and daily use should be encouraged for babies, children, and adults. One is never too old to benefit from fluoride toothpaste. As long as one has teeth, using fluoride toothpaste is a good idea. For babies, as soon as the first tooth

comes in, daily use of a small smear of fluoride toothpaste should commence whereas for children three years and older, a pea-size dab is recommended. Parents should be advised to place the toothpaste on the width of the toothbrush not the length, as it results in a much smaller dab of toothpaste.

Fluoride mouth rinses are effective at-home regimens when used daily but not recommended for children under 6. They should not be used unless the child can effectively spit to assure that they do not routinely swallow it. Used effectively, fluoride mouth rinses can decrease dental caries over thirty percent in high-risk populations. Fluoride varnish is a highly-concentrated fluoride product that can be beneficial for use with babies and young children. Fluoride varnish can be used three times in a two-week period for remineralization of white spot lesions. For prevention purposes, it can be applied three to four times annually. Dental sealants are plastic coatings applied to the biting surfaces of teeth to protect them from cavities. In Central America, PRAT is often used, which involves putting a fluoride-releasing material on the biting surfaces of teeth to prevent cavities and also to treat small cavities.

Dentist have a responsibility to counsel families to limit both total sugar intake and the frequency of exposures per day to enhance both general overall health as well as oral health. Children should begin using a cup at 6 months of age and parents should consider weaning from the bottle at 12-14 months of age. Babies should not sleep with a bottle because this greatly increases the exposure to carbohydrates, thus upsetting the caries balance. Prolonged exposure to the bottle effectively produces an acid bath around the teeth.

6. CARIES RISK ANALYSIS FOR INDIVIDUALS AND GROUPS

Captain Bob Smith

Captain Bob Smith from the U.S. Public Health Service made a presentation on caries risk analysis for individuals and groups.

There are different levels of risk for dental caries; however the important message is that caries risk can change. Therefore, it is essential to undertake caries risk analysis for individuals and groups.

Dental caries can be reduced by providing systemic fluoride to families through water fluoridation and using fluoride toothpaste. Families who do not use salt fluoridation will be at higher risk for dental caries. Children will benefit from prevention programs beginning when their first teeth erupt into their mouths when they are less than one year old. Eating or drinking sugared foods throughout the day is not good for teeth and for overall health. Children over the age of two who still sleep with a bottle or who walk around all day sipping from a bottle or another container, are at increased risk for dental caries. Any child who eats lots of sugar and other refined carbohydrates is at increased risk for dental caries – that is true for adults too. Dental caries can be linked to the income level and education of the parents. Dentists should keep this in mind as they work with both individuals and groups to improve their oral health. Children who come from families with few dental caries and who have little plaque and no white spot lesions or other signs of cavities, are generally at lower risk for dental caries. When interviewing the caregivers of children with special needs, dentists need to obtain information on medications, special diets or food preferences, medical conditions and current and planned medical treatment. It is important to ask if the child is physically and mentally able to brush their own teeth, and if not, whether the caregiver brushes the child's teeth.

Groups of children or adults at high-risk for future dental caries need increased levels of fluoride and other prevention services. The caries risk for a group may need to be assessed. For example, if the government is examining whether fluoride varnish should be applied in a daycare or school setting, it would want to ascertain the cost-effectiveness of applying fluoride for all of the children compared to only those at a high risk for dental caries. If a group has a low socioeconomic status or a documented high prevalence of dental caries, and assuming that most of the children are at high risk, the policy decision might be taken to implement school and community-based interventions for the group. Most groups of special-needs children will be at high risk for dental caries.

7. ORAL HEALTH SCREENING AND FLUORIDE VARNISH FOR INFANTS AND TODDLERS & TIPS FOR MANAGING THEIR BEHAVIOR

Tooth decay is a prevalent chronic disease of childhood – usually more prevalent than asthma or hay fever. It is critical to aim prevention programs at children between six months and three years of age.

Severe early childhood caries (ECC) is characterized by a distinctive pattern of tooth decay in infants and young children, often beginning on the maxillary anterior teeth and rapidly progressing to the other primary teeth as they erupt. It can begin to develop as soon as teeth erupt into the mouth at 6-10 months of age which is why an early oral health assessment and fluoride varnish treatments are so important. Severe ECC is costly and places a significant financial burden on parents least able to afford treatment. Some children with ECC may need to be hospitalized and treatment may need to be completed under general anesthesia.

Once the disease is established and caries penetrate to dentin and beyond, restorative care is essential. Close monitoring for follow-up care is needed. Unless there is follow through using contemporary preventive education and other strategies, various studies have shown that 40-50% of children treated for ECC have recurrent decay within 4-12 months. With only traditional treatment and no preventive follow-up, the disease continues.

Children with ECC learn to live with pain day in and day out. As they get older and go to school, some of these children experience an increase in missed school days and an inability to concentrate when they are in school. Pain can also affect a child's sleep and nutrition, again resulting in poor overall health and well being. After treatment, parents report that their child is sleeping better, doing better in preschool, and simply happier. Research has linked pain and infection associated with ECC to a failure to thrive and delayed growth patterns. Children need their front teeth for eating, and also for smiling – important for good self-esteem.

Primary teeth are important for several reasons. Early tooth loss can result in poor nutrition and diminished physical growth. Tooth decay can also result in exposed nerves within the teeth that make them sensitive to hot and cold, thereby further affecting eating habits and good nutrition. Children who have their front teeth extracted at an early age generally talk with a lisp. Baby teeth fall out in a pattern that guides the permanent teeth into their proper places. When teeth are extracted early due to decay, the permanent teeth are more likely to come in crooked. Children need to have beautiful smiles and good self esteem.

ECC can be prevented. Research has shown that children who received four fluoride varnish treatments between the ages of 9-24 months of age had over 30% fewer cavities. Fluoride toothpaste used daily, beginning when the first tooth erupts, can improve a child's oral health.

Soon after the first tooth erupts, and before one year of age, babies should receive an oral health screening. If they are at high risk for dental caries, they should also begin to receive fluoride varnish treatments. Nurses, teachers, and other community health workers can be trained to provide these important services.

The following is a list of supplies needed for oral health screening and fluoride varnish applications: 2X2 gauze; baby/child toothbrush; fluoride varnish; and examination gloves. Optional items might include a direct light source, like a flashlight and toys to keep the child distracted. To accomplish the oral health assessment and fluoride varnish application all in a matter of minutes, the needed supplies should be ready for both procedures once the child is positioned.

When approaching a child, the dentist should pay attention to voice control and nonverbal communication. If the dentist's voice is calm and their nonverbal communication is relaxed and friendly, then the child will respond better to them. Other good tools to build rapport with the child include positive reinforcement and distraction (e.g. toys, stories, and humor).

If the child is older, the child could be involved in holding the toothbrush or helping the dentist count the teeth. The dentist should talk with the parent, building trust with both the parent and the child, and asking both closed and open-ended questions on the following topics: "Is your home served by fluoridated water or do you use fluoride salt? Have you started cleaning your child's teeth yet with fluoride toothpaste? If so, tell me how you clean them. Have you taken your child to a dentist yet? Have you or the child's siblings experienced lots of cavities? Is the child weaned from the bottle yet? Does the child sleep with the bottle all night or walk around with a bottle or cup throughout the day? Describe a typical day's diet." This information will give clues about the child's risk for dental caries.

For the assessment, the child is initially held in the mother's arms and slowly lowered to the health professional's lap. The dentist should ask the parent, or another helper, to hold the child's hands and help keep the child from wiggling. For children 3 years and older, the child can stand in front of the dentist. Many young children will cry when lowered back into the health provider's lap. This is normal behavior for a young child and in fact, gives the dentist an opportunity to see the child's teeth. The key is to do the screening quickly.

A dentist should show first show the child the toothbrush to make them comfortable. The toddler can be encouraged to "help" with the cleaning of the teeth, while the dentist shows the mother proper oral hygiene and positioning techniques. This is a good time for the dentist to reinforce the importance of cleaning the teeth daily using fluoride toothpaste and a child-size toothbrush.

Caregivers should be informed that the earlier they start cleaning the baby's teeth, the easier it will be as the child grows older. At home, parents can use the knee-to-knee position or the caregiver can hold the baby on her lap, facing outwards, and clean the teeth from behind. Some caregivers may clean the teeth during bath time or while the child is on the changing table, approaching the baby from the front. Families should be encouraged to find a method that works for them, and to include fluoride toothpaste as part of this daily routine.

The toothbrush can also serve as a mouth prop, preventing the child from biting down on the dentist's fingers. Dentists can use the toothbrush to "count" the child's teeth, while looking for

plaque and chalky white spots, brown spots, or obvious cavities. Chalky white spots can actually be remineralized with the use of fluoride varnish. As decay progresses, brown spots will appear.

Any signs of tooth decay should be pointed out to the parent. Caregivers should be encouraged to lift the baby's lip while cleaning at home and to keep an eye out for chalky white or brown spots, being sure to look at both the front and back of teeth, and near the gum line.

At this point, the dentist has gathered the data needed to provide a risk assessment and determine if the child is at low or high risk for dental caries.

For any child at high risk for tooth decay, the dentist will want to provide a fluoride varnish treatment to all of the teeth. Use of an individual dose product is recommended since it is all inclusive with its own applicator, contains the appropriate amount of fluoride, and keeps the procedure simple and safe.

Fluoride varnish should be applied by: drying the teeth lightly with a gauze square; opening the packet of varnish; stirring it with an applicator; and the "painting" the varnish on the child's teeth. It is usually good to begin on one side of the mouth and "paint" the varnish on all of the outsides of the teeth and then return and do all of the insides, or tongue-sides of the teeth. Do one arch at a time, beginning with the lower teeth because this is where the saliva will pool. The total procedure should not take more than a couple of minutes and even less time for babies with only a few erupted primary teeth. If saliva flow is heavy, the dentist may need to dry a few teeth at a time and paint the varnish on, using a "wipe and paint" technique. Depending on the fluoride varnish product you choose, it might leave a mild yellow or brownish tint on the teeth. The tint will disappear when the teeth are brushed. Parents should be advised not to clean the child's teeth until the next day. The fluoride treatment works best if it is left on the teeth overnight.

Now it is time to raise the child back up into the mother's lap. Most young children will stop crying at this point. This is a good time to give the child the toothbrush or a soft toy to play with while you talk with the caregiver.

The dentist should record any signs of tooth decay, document if the child is at low or high risk, and whether a referral is needed. The importance of these referrals needs to be reinforced to the family as tooth decay is an infection and needs to be treated – not just with fillings but with diet, fluoride, and sealants or ART. This is another opportunity to reinforce with the family that it is what they do at home that will most likely prevent ECC. Remind them once again to brush their child's teeth with a small smear of fluoride toothpaste daily.

Finally, the dentist will want to let the caregiver know when the child should next be seen. Children at high risk for tooth decay need to be seen more often. If the child is at high risk for ECC, the importance of fluoride varnish applications 3-4 times a year should be stressed.

8. EFFECTIVE HEALTH EDUCATION AND COMMUNITY ORAL HEALTH MESSAGES

To improve oral health, we need to change health behaviors. Health education research and learning theory support providing 1-2 key messages at each visit. Therefore, it is important to

think in terms of “baby steps.” The dentist should ask themselves, “If this family only made one or two changes to improve their child’s oral health, what would I want them to be?” The answers to this question guide the dentist to their choices of what to focus on at any given visit.

Positive reinforcement is important. People learn most effectively when they are in a positive environment. A positive environment is built when patients are treated with respect and kindness. Messages should be individualized. The professional will know if they are getting off track when the same things are being said to everyone. Try to figure out what each person cares about, and talk about that.

The most important thing a health professional can do is to remain non-judgmental, and try to understand why people have poor oral health habits. Many health beliefs are cultural or family-based and may or may not be true. These are myths but should not be underestimated because they often have strong roots in being passed down from a highly-trusted elder, generation after generation. Sometimes a whole community believes in certain health myths, or they have ways of raising children that might not be healthy. The health professional needs to carefully present the facts while being culturally sensitive and respectful.

Community oral health messages need to be scientifically accurate, consistent, and repeated often. It is important to choose a few oral health messages so that all work together to promote the messages throughout the communities. Suggested messages include:

- Baby teeth are important.
- Healthy Smiles, Healthy Families!
- Get an oral health screening for your baby by one year of age.
- Everyone should brush daily with fluoride toothpaste, beginning when a baby’s first tooth erupts.

Health education is a process. It usually takes many triggers, over time, to change health behavior. Each counseling visit should be considered as getting one step closer to change.

9. TOPICAL FLUORIDE

Topical fluoride is a key factor in the prevention and reduction of tooth decay. It works by inhibiting demineralization, enhancing remineralization, and inhibiting plaque bacteria. Discussion ensued on two kinds of topical fluoride interventions that can be used in communities. The first is the daily use of fluoride toothpaste and the second is fluoride varnish applications.

A community-wide intervention is to promote the daily use of fluoride toothpaste for everyone, regardless of age. This can be done through the use of media like newspapers, radio, posters, etc. The focus could be on babies and young children promoting daily brushing with fluoride toothpaste in daycare centers and schools provided that there is no fluorosis at the time of the screening.

The application of fluoride varnish for infants could be another focus. Ideally, four fluoride varnish treatments should be provided between the ages of 9-24 months. In addition, children of all ages who are at high risk for dental cavities, will benefit from 3-4 topical fluoride varnish

treatments a year. Ways should be found to assure that babies and young children at high risk for dental caries receive topical fluoride varnish treatments several times a year. Settings could include: well-child clinics in conjunction with immunizations; day care centers, preschools; and schools.

The following chart was presented outlining ideas to promote topical fluoride in communities by listing who might be involved, what can be done, and where it might be done.

Who?	What?	Where?
– Teachers – Parents – Volunteers – Nurses	– Screening for infants and toddlers – Fluoride varnish – Promote the use of fluoride toothpaste	– Day care centers – Preschools – Schools – Medical Clinics

10. EFFECTIVENESS OF ATRAUMATIC RESTORATIVE TREATMENT (ART) *IN A PREVENTION PROGRAM*

In accordance with the 1997 PAHO Directing Council Resolution regarding oral health in the Americas, Member States were urged to focus more resources on increasing access to oral health services for the neediest populations in their respective countries.

Although dental caries has substantially decreased in the industrialized countries, it remains to be a widespread problem all over the world. Most of the carious teeth in the developing countries tend to go untreated to such an extent that the only treatment option available is extraction.

The Atraumatic Restorative Treatment (ART) approach was developed to suit the needs of the developing countries. ART includes both prevention and treatment of dental caries. This procedure is based on excavating and removing caries using hand instruments only and restoring the tooth with an adhesive filling material such as glassionomer. ART is non-threatening, not painful and therefore does not need anesthesia, and does not use expensive electrically driven equipment. The ART technique provides the lowest cost service modality producing acceptable outcomes.

As a best practice model, it provides a framework to implement large-scale oral health services and will reduce inequities in access to care. This technique is simple enough to train non dental personnel or primary health care workers. ART therefore is suited for people residing in remote areas and for field practice and can be carried out in schools, village halls or in health centers with minimum equipment and resources. An ART-based strategy for expanding coverage at reduced cost should become a cornerstone of policy at the country level.

11. INFECTION CONTROL

Mrs. Blanco

Mrs. Rosalva Blanco, Infection Control Sister, at the Northern Regional Hospital in Belize gave a presentation on infection prevention and control. The goal of infection control is to prevent or reduce the risk of transmitting microorganisms that could cause disease. There are four principles of infection control: take action to stay healthy;

avoid contact with blood and body fluids; make items safe for use; and limit contamination.

The primary defense against infection and transmission of germs is healthy, unbroken skin. Therefore, hand hygiene is considered the single most important way to reduce the risk of disease transmission. Hand washing is part of hand hygiene. Hands need to be washed when hands are visibly soiled; if hands have touched contaminated items or surfaces; before and after treating a patient; before putting on and after removing gloves; when leaving a clinic; and when using the bathroom.

Hand washing can be done with plain soap and water. It is not necessary to use antimicrobial soap. Alcohol-based hand rubs can also be used. Either method is effective for removing the microorganisms. The only time an alcohol-based hand rub is not effective is if hands are visibly soiled. In that situation, washing hands with soap and water is recommended. Hand hygiene also involves regular use of hand lotion to improve the health of our skin and to prevent skin dryness. However, do not use hand lotions and moisturizers when wearing gloves. It is best to use hand lotions and moisturizers during non-clinical times. Finally, hand hygiene includes keeping fingernails short. Multiple outbreaks involving fungal and bacterial infections have been associated with artificial nails. For that reason, it is recommended not to wear artificial fingernails when working in clinical situations.

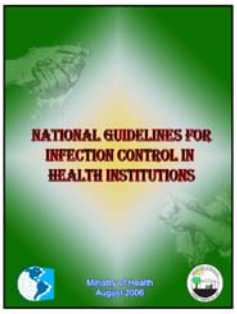
When the health professional is not feeling well because of a cold or the flu, they should stay away from patients so as to avoid cross contamination.

Contact with blood and body fluids should be avoided. Dental staff should wear PPE (Personal Protection Equipment) when treating patients. PPE includes gloves, masks, protective eyewear and clothing. PPE prevents exposure of blood or other potentially infectious material to the skin and mucous membranes of the eyes, nose and mouth of dental health-care personnel. The exposure can happen from aerosols and spatter when dental staff uses a dental hand piece and other dental equipment like the air-water syringe. When fluoride varnish is applied to children's teeth, a 2 x 2 gauze and a varnish applicator should be used. Because neither an air-water syringe nor a dental hand piece is used, dental staff are not at risk of exposure to aerosols or spatter. They do not have to wear masks or protective eyewear and clothing. However, as their hands could be at risk of exposure, gloves are worn when applying fluoride varnish.

In a dental office, contaminated instruments are sterilized and equipment is disinfected and contaminated disposable items are replaced with new ones before a patient is seated for an appointment. Because only disposable items are used when applying fluoride varnish, there is no need to learn sterilization procedures. Disposable items are intended for use only on one person. They are not intended to be cleaned, disinfected or sterilized and used on another person. Gloves are single-use items. This means that gloves are not washed and reused. Other disposable single-use items include 2x2 gauze, fluoride varnish mix, and applicators.

In a dental office, staff should either clean and disinfect surfaces or cover them with barriers. If surfaces are not covered with barriers or cleaned and disinfected, there is a risk that other patient-care items, devices or gloved hands may become contaminated. Surface barriers protect surfaces and are changed between patients. When materials for fluoride varnish are set-up on a paper towel, the paper acts like a barrier covering the work surface, and limits

contamination. It also makes clean-up easier. All the single-use disposable items (including gloves) can be wrapped in the paper towel, and disposed of in a trash container.



Once the fluoride varnish application has been initiated, gloves have come in contact with the patient's germs. It is therefore important not to spread those germs to other patients by contaminating the 2x2 gauze package. The dentist should make sure to have all the supplies included in the set-up before starting to apply the fluoride varnish.

In the workshop, mention was made of the Belize Ministry of Health publication "National Guidelines for Infection Control in Health Institutions". Ensuring the inclusion of oral health was suggested by the workshop participants.

12. POARE: A MODEL FOR PROGRAM PLANNING

Captain Smith made a presentation on "POARE" as a model for program planning. He stated that one first needs to decide on which oral health problems are of the greatest concern in your community. This can be done by using local or national oral health data. Health problems that community members are most concerned need to be taken into consideration. A number of oral health problems might be identified. Based on resources and the community interest, the most appropriate problem(s) to be addressed should be identified.

After deciding on a problem on which to focus, a problem statement should be developed containing the following elements: extent of the problem; target population; availability of appropriate interventions to address the problem; and community support.

Objectives (structure and process) to address the problem need to be written that are SMART (specific, measureable, achievable, realistic and time specific).

Next actions or activities should be identified that if implemented will achieve the objectives. This should include the "who, what, when, where, and how".

Each objective should be reviewed to determine how it will be evaluated.

13. PROGRAM PLANS

Participants were divided into groups according to the health region in which they worked. Each group was asked to develop and present a plan based on the POARE approach. The following pages show the presentations that were made in plenary session.

CENTRAL REGION

Health Problem:	High incidence of Dental Caries in the Standard VI Primary School Population of the River Valley in the District of Belize.
General Objective:	To decrease the incidence of Dental Caries in the standard VI primary school population of the River valley in the District of Belize.
Specific Objectives:	Increase the number of Dental Health Education Sessions in the standard VI primary school Population of the River valley in the District of Belize. Improve the availability of tooth brushes and tooth paste for the standard VI primary school Population of the River valley in the District of Belize. Increase the number of tooth brushing drills. Train the Community Health workers in Dental Health Education. Train the teachers in Dental Health Education. Implement the fluoride program in the standard VI primary school Population of the River valley in the District of Belize.
Activities:	Conduct Dental Health Education sessions twice a month in the standard VI primary school Population of the River valley in the District of Belize. Distribute tooth brushes and tooth paste in the selected Population of the River valley in the District of Belize at least twice a year. Conduct tooth brushing drills twice a month in the selected Population of the River valley in the District of Belize. Conduct three workshops to train the Community Health Workers and teachers in Dental Education yearly. Conduct Fluoride varnish application twice a year in the selected Population of the River valley in the District of Belize. Conduct initial oral examinations in the selected Population of the River valley in the District of Belize.
Resources:	Obtain the assistance of HECOPAB to finance the workshops for the training of Community Heath Workers and Teachers. Liaison with the Central Health Region for the availability of transportation for the outreach programs.

Negotiate with NGO'S, CHR, Volunteers and other entities for the supply of fluoride varnish and other materials that are needed to implement and sustain this program.

Obtain the financial support from CHR to recruit more Community Health Workers and Dental Assistants.

Evaluation and Follow-up: Compare the incidence caries twice per year in all patients who receive fluoride varnish applications.

Conduct a short Dental questionnaire in the selected Population of the River valley in the District of Belize.

Conduct a short Dental questionnaire for Teachers and Community Health Workers of the River valley in the District of Belize.

Request monthly reports from the Community Health Workers, of Dental Education sessions performed.

NORTHERN REGION

Health Problem: **50% of pre-school children age 3-5 yrs. Have dental caries.**

General Objective: Reduce the incidence of dental caries among 3-5 yrs old by ___ % during the next two years.

Train 100% of nurses from Maternal and Child Health and HECOPAB apply two fluoride varnish treatment during child health clinic for 90% of the children 1 ½ to 2 ½ years

Activities: **Screening of 3-5 year olds**

1. Inform regional and deputy regional managers, along with other relevant head of section
2. Arrange venue for training
3. Invite Parents and children for demonstration
4. Invite MCH nurses and HECOAB to training
5. Conduct training for MCH nurses and HECOPAB to apply fluoride varnish to children 1½-2½ years at child health clinics
6. Promote daily brushing with fluoride toothpaste.

"Fluoride for a millennium Smile"

Who and When:

1 Dr. Major – May 2010
2. Dental Staff – May 2010
3. MCH staff – May 2010
4. Ms. Jones – May 2010
5. Dental Staff and Mrs. Magana – June 2010
6. Dental staff, Mrs. Magana, Ns. Terry, Media – July 2010

Resources:

Dr. Major's time

MCH/HECOPAB's time to attend training and apply Fluoride varnish during child health clinics

Dental clinic (training will be conducted).

Food (from Corozal Community Hospital)

Supplies for fluoride varnish demonstration: gloves, mask, gauze, fluoride varnish, tooth brushes

Media - (Radio stations - to disseminate information to the community)

Evaluation and Follow-up:

During Child Stimulation Month (March) screening will be done.

Keep records of trained personnel for reference.

Number of varnish applications will be recorded on the Child Health Clinic charts and submitted to Dr. Major.

SOUTHERN REGION

Health Problem:

The primary problem observed in the Southern Region is that a large percentage (estimated 80%) of 6 and 7 year olds seen in Community X have dental caries. Community x refers to the Seine Bight village in the case of the Stann Creek District, and the San Marcus Village in the case of Toledo

The criteria utilized for choosing a village and target group was based on several factors including the following: low

socioeconomic level families; geographic isolation; and children as a risk group

General Objectives:

Application of fluoride varnish to 100% of pre-school children ages 3-4 for the next four years.

Train 100% Pre-school X teachers in the application of fluoride varnish within a 30 day period

Train 100% of PTA X and CNA in Village X to detect early decay (white spots) by October 2010

Train 100% of PTA X and CNA in Village X on the importance of proper nutrition and oral hygiene as it relates to dental health by October 2010

Reduce the rate of incidence by __% of dental caries in 6 and 7 year olds within 4 years

Activities:

Carry out DMFT survey in 6-7 year olds of Community X before intervention
Make arrangements for transportation, Prepare materials, Carry out DMFT in Preschools

Who: District Dental Officer/Dental Staff

Apply Fluoride Varnish to Preschool children in Village X every 6 months
Make arrangements with Regional Manager for transportation; coordinate with school principal on implementation of fluoride varnish application by dental health care professionals; procure necessary supplies for fluoride varnish application; organize materials and instruments for application; apply fluoride Varnish

Who: District Dental Officer/Auxiliary Dental Officer/Dental Staff

Train pre-school teachers in the application of fluoride varnish within a 30 day period
Make transportation arrangements with Regional Manager; meet with school principal to coordinate venue, date, and time of training; meet with CNA to inform him/her of venue date and time; prepare materials for training; impart presentation

Who: District Dental Officer/Auxiliary Dental Officer/Dental Staff

Train PTA of preschool X and CNA of Village X to detect early decay (white spots) by October 2010
Make arrangements for transportation with Regional Manager; meet with principal to coordinate venue, date and time for training; prepare materials for training; impart presentation

Who: District Dental Officer/Auxiliary Dental Officer

Train PTA of Preschool X and CNA of Village X of the importance of proper nutrition and oral hygiene as it relates to dental health by October 2010
Make transportation arrangement with Regional Manager; coordinate with school principal on venue, date and time for training; meet with CNA to inform him/ her of venue, date and time; order tooth brushes and toothpaste; prepare materials for training

Who: District Dental Officer/Auxiliary Dental Officer/Dental Staff

Raise awareness of proper hygiene to Children of Preschool X in Village X by February 2011
Arrange transportation with Regional Manager; meet with principal to coordinate school visit; carry out puppet show in classroom; do story with flannel board; prepare materials for education

Who: District Dental Officer/Dental Staff

After 4 years of implementing program, carry out DMFT survey in 6-7 year olds of Village X after intervention
Make arrangements for transportation; prepare materials; carry DMFT in Preschools

Who: District Dental Officer/Dental Staff

Resources: Vehicle for transportation, Print/ Copy paper materials, red/blue pencil, time for District Dental Officer and Staff, basic instrumentation (mirror, tweezers, explorer) gauze, gloves, mask, fluoride varnish, desk, chair, table, hand sanitizer, paper towel, training space, projector screen, computer, projector screen, garbage bags

Evaluation and Follow-up: Keep list of names and amount of children who received fluoride varnish treatment as well as date to compare to children who did not receive the treatment

Keep a list of preschool teachers and CNA trained and get feedback from them as to how as to if they got full participation of the children and if they were satisfied with the way the program was carried out

Do a follow up every 6 months to verify if program is continuing progressively and to evaluate if Principal, teachers and CNA has changed for new training if necessary

Review before and after DMFT survey on this group to determine if there was a decrease in the incidence of caries at 6-7 years old

Review tooth brushing skills of Preschool X kids in Village X

WESTERN REGION

Health Problem: **Mothers lack the knowledge of the importance of Oral Health**

General Objective: 50, 1 year old children attending MCH will be evaluated every six months

- Identify children with incipient Dental Caries
- Educate the mothers on the importance of Oral Health
- Teach Tooth Brushing Technique
- Application of fluoride varnish

Activities: Training by the Dental Team of the Health Educator on tooth brushing technique on their next school visit

Upon availability of materials, training by the Dental Surgeon of the Health Educator and dental assistants on the application of fluoride varnish

Presentation of Program by the District Dental Surgeon to the Regional Health Manager and Heads of Section at the upcoming meeting

Immediate requisition of materials by the District Dental Surgeon

Signing of consent forms by parents on the day of the activity

Issuing of pamphlets by the Dental Team on Clinic days for 1 year olds

Video show organized by Dental Team on Clinic days for 1 year olds

Recording of the number of teeth present in the mouth by the Dental Team on clinic days for 1 year olds

Resources: Dental Staff - 1 Dentist; 2 Dental Assistants; 1 Health Educator
MCH Clinic (During clinic)

Supplies: Camera; Gloves; Gauze; Fluoride Varnish; Toothbrushes

Evaluation and Follow-up: Checkup every 6 months until the child is 4 ½ yrs old, photograph and apply varnish to those selected
Document the Findings

14. CREATING SUSTAINABLE SYSTEMS

Sustainability, a complex issue, means resources to operate a program are adequate and available when needed. It also means that the purpose, spirit, and ideals of the program stay intact even when there are changes in staff or who is sponsoring or funding the program.

Sustainability must be addressed when planning a program; otherwise, these important issues get lost in the day-to-day operations or are dealt with only when a crisis occurs. When considering what is needed to attain sustainability, it is important to consider what is being evaluated. Data collection and evaluation reports are critical when communicating program performance and what keeps a program successful. Evaluation reports also provide justification when approaching current and future funding organizations.

15. GETTING READY FOR THE COMMUNITY WORKSHOP AND FACILITATION OF ADULT LEARNING

The workshop is designed to be taught in a consecutive 3-day period, but one may need to break the training up differently to accommodate your community members. The intended audience is medical providers, teachers, daycare workers, and other community members who are interested in improving the oral health of children in your community. The training will be most effective for groups of 10-40 people; however, it can be used successfully with larger groups.

The Trainer's Guide provide the trainer with everything he/she needs to provide the three-day workshop. The entire training is scripted, but trainers are encouraged to add local facts, and tell their own stories and tips to personalize the materials.

16. GROUP RECOMMENDATIONS

Each group was asked to present recommendations.

Central Region

- Human Resources in the Dental Department should be increased.
- Transportation to rural and urban areas should be improved and increased.
- Dental Health Education materials should be improved.
- The systemic fluoride program in primary schools should be implemented.
- The incidence of dental decay in primary schools should be reduced.
- The availability of dental health materials for the prevention program should be improved.

Northern Region

- Fluoride varnish should be applied to children in maternal and child health programme
- Dental health education should be integrated in primary health care programme
- Provision of ART for the primary schools comprehensive programme as stated in the National Oral Health Plan
- Prenatal clients should receive dental prophylaxis during their first trimester.
- Fluoride varnish should be applied to children by maternal and child health nurses.
- Dentists and dental nurses should apply fissure sealants to first permanent molars (healthy) for children in comprehensive incremental programme.
- 100% prenatal clients in the first trimester should be referred for dental prophylaxis

- Maternal and child health nurses should be trained in the importance of fluoride varnish and method used during application by demonstrating using video clips and children.

Southern Region

- More human resources should be trained to assist in carrying out dental programs in the field and regulate the practice of dentistry.
- A vehicle should be assigned specifically to dental departments for regular use to access rural areas
- There should be a sustainable supply of material resources for carrying out preventive activities
- Old or broken instruments should be replaced with new ones regularly as needed
- Permits should be limited or stopped to visiting teams and students from practicing and experimenting on our Belizean population
- Communication should be improved between the Belize Medical Council and the District Dental Officer to verify legal practice in a district
- District Dental Officers should be empowered to be able to regulate the practice of dentistry in our regions
- More continuous education workshops should be facilitated as well as international participation for the dissemination of relevant and up to date information.

Western Region

- Dental health should be included in all activities and be community as well as hospital oriented.
- The importance of dental work should be enhanced, e.g. some dentists working without an assistant or using anyone to assist.
- The school program should be revised.
- Visiting teams should be monitored.
- District Dental clinics should be supervised.
- The functionality of dental equipment and availability of instruments and materials needs to be monitored.
- There should be a DMFT Survey on school children.
- A Human Rights and Public Health workshop should be conducted to apply the instruments of Human Rights into our Daily work.

17. WORKSHOP RECOMMENDATIONS

Background

In reaching their recommendations, the participants recalled the PAHO Directing Council Document CD47/14 on the Proposed 10-Year Regional Plan on Oral Health for the people of the Americas and its resulting resolution CD47.R12 that urged member states to:

- make every possible effort to ensure a basic level of access to oral health care, with emphasis on vulnerable groups;
- 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;
- 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; and
- promote integration of oral health into the primary care strategy, family health, and perinatal health.

Participants felt that that oral health is a critical aspect of general health conditions in Belize 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.

Furthermore, participants were of the opinion that despite 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; 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; and quality of oral health care. Interventions targeted are reducing these disparities must identify disadvantaged groups; assess their needs in order to develop successful and sustainable interventions.

After participating in the workshop, participants considered the right to health as the right to an effective and integrated health system encompassing oral health care and the underlying determinants of oral health, which is responsive to national and local priorities, and accessible to all. Use of international human rights principles, treaties and standards ratified by Belize is seen as an essential strategy to improve the health of the people in Belize and is therefore an integral dimension of the design, implementation, monitoring and evaluation of oral health-related policies and programmes. As a follow-up to the workshop, participants were encouraged to take PAHO's online course "Basic E-Learning Course on Human Rights and Health" accessible at the following website:

http://www.xceleratemedia.com/TATC/clients/PAHO_9_01_2009/index.html

Participants also recalled that the Belize Ministry of Health "Health Agenda 2007-2011" stated that the Belize Ministry of Health envisions a national health care system which is based upon equity, affordability, accessibility quality and sustainability in effective partnership with all levels of government and the rest of society in order to develop and maintain an environment conducive to good health. As such, participants felt that this vision recognized General Comment 14 that set out four criteria by which to evaluate the right to oral health – availability; accessibility; acceptability; and quality.

The participants made the following recommendations and requested that the Senior Dental Surgeon of the Ministry of Health seek the support of the senior policy decision makers in the Belize Ministry of Health/Belize Government for their implementation:

1. Control the level of fluorides in water and availability of fluoridated salts in selected communities of the Northern Region;

2. Conduct a national DMFT[1] survey to identify whether there has been a epidemiological shift in dental caries in Belize and to identify disparities in oral health and vulnerable groups affected;

3. Strengthen licensing requirements by the Belize Medical Council for dentists and other accompanying staff visiting Belize to provide dental health services and then to communication granting of privileges to the relevant District Dental Officer;

[1] DMFT (decayed, missing or filled teeth) is a unit of measurement describing the amount of caries in a population.

4. Formalize preceptorship/internship programs for dental students doing practical training in Belize health facilities whether training is provided inside or outside Belize;

5. Define human resources to provide dental services in the primary care settings in each health region and train/retrain/recruit human resources accordingly;

6. Develop, implement and monitor the implementation of oral health protocols, policies, guidelines, SOPs (standard operating procedures);

7. Procure and replace dental equipment as needed ensuring standardization in all dental health clinics in the public sector and ensure implementation of a preventive maintenance program;

8. Strengthen outreach oral health programming to rural areas through mobile clinics (e.g. transportation, portable units, revision of community health worker manual)

9. Include oral health services and professionals within the agenda of the licensing and accreditation process within the Ministry of Health

10. Strengthen integration of oral health into primary health care especially in maternal and child health

11. Strengthen dental health care provision as part of inter-sectoral, integrated delivery systems

12. Train public health personnel on human rights obligations applicable to oral health and other areas

13. Promote inclusion of dental health data in the electronic health records within the Belize Health Information System (BHIS)

14. Include dental health care as an insured benefit in the National Health Insurance Program run by the Social Security Scheme

18. SENIOR DENTAL SURGEON'S REPORT

"History in the making was seen as we embarked in this workshop." The amount of work that had been put into this event sounded the alarm of trumpets indicating a well compacted and organized workshop. From the onset we had seen the amount of preparation that PAHO/WHO had given to the importance of oral health in Belize as they continue to support the Dental Department. Strenuous efforts were seen as the three (trainers) were recruited from different parts of the United States and Belize to impart this workshop. These persons included: Ms. Anna Scharfen, Coordinator of the Caries Free Communities Initiative in PAHO/WHO, Mr. Javier Vasquez, Human Rights Law Advisor in PAHO/WHO who stated that the human rights law based approach provides a framework as well as a useful guide for analysis and action, Captain Bob Smith from the U.S. Public Health Service who made a presentation on caries risk analysis for individuals and groups and Mrs. Rosalva Blanco, Infection Control Sister, at the Northern Regional Hospital in Belize, who gave a presentation on infection prevention and control.

Twenty-five participants were invited from different health departments HECOPAB, Planning Unit, Auxiliary Dental Officers, Dental Assistants and Dental Surgeons from around the country and PAHO/WHO Senior Management Advisor. Each of the participants undertook the challenge with an open mind and attention as they developed step by step the different objectives outlined by the workshop. In front of individual desktop computers and with storage flash drives and hard cover folder, each participant took advantage of the presence of the trainers as they developed and presented plans based on the POARE approach. The problems brought forward were directly indicative of true pictures and problems faced in the communities they are working with as they carry out visits during their mobile outreach program.

For the first time the dental department integrated the human rights approach in this first three days workshop and presented recommendations. Recommendations were also made in relation to the different community plans and internal issues that block the different plans from coming true.

The information received has enlightened the Belize dental department as they join in the battle that will lead to Caries free Communities. On behalf of the Dental Department I would like to extend a note of appreciation for all the assistance rendered. It is efforts like these that illuminate the Dental Department to strive for more to reach their goal of freeing Belize from caries.

Annex 1

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Annex 2
Legal Instruments Relevant to Belize

International treaties and conventions relevant to oral health & human rights (binding instruments)

- Convention on the Protection of the Rights of All Migrant Workers and Members of their United Nations Charter (1945)
- International Convention on the Elimination of All Forms of Racial Discrimination (1963)
- International Covenant on Economic, Social and Cultural Rights (1966)
- International Covenant on Civil and Political Rights (1966) and its two Protocols (1966 and 1989)
- Convention on the Elimination of All Forms of Discrimination Against Women (1979) and its Protocol (1999)
- Convention on the Rights of the Child (1989)
- Convention (No. 169) concerning Indigenous and Tribal Peoples in Independent Countries (1989)

Regional instruments in relation to oral health & human rights (binding instruments)

- American Declaration of the Rights and Duties of Man (1948)
- Convention on the Prevention, Punishment and Eradication of Violence against Women
- Convention of Belem do Para. (1994)

International declarations, norms and standards relevant to oral health &human rights (recommendations, non-binding instruments)

- Universal Declaration of Human Rights (1948)
- Declaration on the Rights of Disabled Persons (1975)
- Principles of Medical Ethics relevant to the Role of Health Personnel, particularly Physicians, in the Protection of Prisoners and Detainees against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment (1982)
- Principles for the Protection of Persons with Mental Illness and the Improvement of Mental Health Care (1991)
- United Nations Principles for Older Persons (1991)
- United Nations Standard Rules on the Equalization of Opportunities for Persons with Disabilities (1993)
- Declaration on the Elimination of Violence Against Women (1993)
- Universal Declaration on the Human Genome and Human Rights (1997)

International conference documents and their follow-up relevant to oral health & human rights (recommendations, non-binding instruments)

- World Summit for Children, New York (1990): World Declaration on the Survival, Protection and Development of Children and Plan of Action for Implementing the World Declaration, and its follow-up, the United Nations General Assembly Special Session (UNGASS) on Children (2002): A World Fit for Children
- International Conference on Population and Development, Cairo, 1994: Programme of Action;
- Fourth World Conference on Women, Beijing (1995): Beijing Declaration and Platform for Action, and its follow-up, Beijing Plus 5 (2000)
- United Nations General Assembly Special Session (UNGASS) on AIDS (2001): Declaration of Commitment on HIV/AIDS .Global Crisis. Global Action
- Second World Assembly on Ageing (2002): Political Declaration and Madrid International Programme of Action on Ageing