AFFORDABLE FLUORIDATED TOOTHPASTE FOR DEVELOPING COUNTRIES

Presentation of recent experiences

Fluoridated toothpaste has proven to be the most effective public health measure to reduce caries. The affordability of such toothpastes and their quality are major issues for all active in oral health development. The following two papers highlight experiences from Nepal and Burkina Faso explaining the process of advocacy with governments, NGOs and manufacturers.

I. Planning For Affordable Fluoridated Toothpaste in Nepal

By Dr. Robert Yee, Nepal

The most prevalent oral disease of public health concern in low-income countries is untreated dental caries. However, the governments of low-income countries have insufficient resources to provide the most basic essential health care for their population, let alone treatment of dental caries. Moreover, the cost of restorative treatment is disproportionately expensive in relation to its priority.

For many of the poor and disadvantaged, there exists the dilemma of putting food on the table and enduring with a child’s toothache or having to pay for expensive dental treatment. This is the situation faced by many in Nepal, which has neither the human nor the financial resources to meet the oral health care needs of its 23 million people using the biomedical approach of conventional dentistry.

Due to increased sugar consumption, the 12-year-old DMFT in Nepal is doubling every 10 years. Analysis of drinking water sampled from throughout Nepal has shown that the natural levels of fluoride are so low as to not be effective in preventing dental caries.

The decline in dental caries in the past 25 years in many countries is mainly due to increased use of fluoridated toothpaste. This demonstrates the importance of this vehicle for fluoride delivery as a means to reduce dental caries on a national scale. A market analysis by the Oral Health Programme (OHP) of the United Mission to Nepal (UMN), a small Christian INGO, showed that in 1998 virtually all toothpastes in Nepal, including those manufactured by many multi-national pharmaceutical companies, were not fluoridated.

Rather than utilise limited resources “downstream” to treat away disease, an “upstream” focus to address the root causes of disease has more sustainable long-term impact. The establishment of healthy public and corporate policies within sectors of society such as education, food manufacturing, government, water supply institutions and toothpaste manufacturers have a profound effect in improving the health of whole communities. The health promotion activity of advocacy or action taken on behalf of individuals and/or communities to address the causes of poor health by influencing the decisions of government, companies, groups and
individuals whose policies or actions affect the health of the people has the greatest potential to build healthy policy. The establishment of a body within governmental health services capable of undertaking these activities should be an essential component of any proposed package of essential oral health care for low-income countries.

In order to create a fluoridated environment, UMN OHP developed an advocacy project aimed at increasing the availability and consumption of affordable, fluoridated toothpaste by targeting the decision makers of manufacturers of local and imported toothpastes. UMN OHP worked with the Nepal Dental Association (NDA) in the development of their “seal of approval” for affordable, locally manufactured fluoridated toothpaste that meets ISO standards. Joint recommendations were also made by OHP and the NDA to the Government of Nepal to reduce the tax on fluoridated toothpastes.

In December 1999 when the advocacy project commenced, annual fluoridated toothpaste consumption was negligible. By March 2002 annual consumption of fluoridated toothpaste was approximately 900 tons and total market share of fluoridated toothpaste was approximately 90%; mostly through the conversion of non-fluoridated toothpastes to fluoridated toothpastes.

To ensure that quality affordable fluoridated toothpastes are increasingly more available to the people of Nepal, OHP and the NDA have developed a set of criteria for fluoridated toothpastes to allow for monitoring for quality assurance and to allow the reduction of taxes on fluoridated toothpastes meeting the criteria. These criteria are now part of the Ministry of Health’s National Strategy for Oral Health in Nepal.

Dental Aid Organisations are accountable to the people they serve and to their donors to utilise the limited available resources to gain the maximum impact on oral health. They must be proactive in seeking opportunities to create supportive environments and influence healthy public and corporate policies that significantly improve the oral health of the whole population. Advocating and collaborating with other partners for affordable fluoridated toothpaste is an important opportunity that can be seized by Dental Aid Organisations in low income countries to significantly reduce the incidence of untreated dental caries.

Dr. Robert Yee
United Mission to Nepal Oral Health Programme
P.O. Box 126
Kathmandu, Nepal
Email: rrsyee@hotmail.com
II. Introduction of an affordable fluoridated toothpaste in Burkina Faso (West-Africa) – a project under way

By Dr Seydou Ouattara, Dr Benoit Varenne

The accessibility of high-quality fluoridated toothpaste is currently not assured for a major part of the population in Burkina Faso. There are two major reasons for this: the actual price and the extremely variable quality of available products. Furthermore, the economical conditions for the development of a market for toothpastes are not yet given.

Following a workshop the Ministry of Health has therefore decided to introduce a new affordable fluoride toothpaste in Burkina Faso. The partners associated with this project are: ACDB (Association des chirurgiens-dentistes du Burkina-Faso/ National Dental Association), AOI* (Aide Odontologique Internationale), CAMEG (Centrale d'Achat des Médicaments Essentiels Génériques et des Consommables Médicaux/Centre for purchase of essential and consumable generic medicaments), Université René Descartes (Paris), WHO (World Health Organization), local consultants (specialists in quality control, distribution, promotion of medical products or social marketing). A first small pilot period is actually under way and is scheduled to be completed in July 2003.

The search for suitable toothpaste producers was first oriented towards West Africa and Europe. However, this search was not successful so that we looked for producers in India. A questionnaire was drafted and sent out to the identified manufacturers in order to evaluate the quality of their production and to get further information related to the production process. The collected information was evaluated and after a site visit in Mumbai, two manufacturers were selected.

The quality of the toothpaste will in a second step be controlled by the National Public Health Institute of Burkina Faso and by a European laboratory.

The personalized packaging is currently designed.

There are three alternatives for the distribution of the toothpaste in Burkina Faso:

• Using the existing distribution network used for essential medicaments and via pharmaceutical distributors
• Using the local commercial distribution networks
• Using both systems

Additionally, there are currently negotiations going on aiming at a tax reduction for fluoridated toothpaste. The final sales price will be half of the price for currently available toothpastes on the local markets. For the final distribution of the new toothpaste the two organisations CAMEG and PSI (Populations Services International) were chosen because they could prove successful programmes and experiences related to other products like preservatives and impregnated mosquito nets.

For the promotion of the fluoridated toothpaste, four different approaches will be tested in urban and rural areas (e.g. integration in a school-based preventive programme).

All partners will jointly evaluate the progress of the project in July 2003 and decide on the way forward.
For more information, contact:
Dr Seydou Ouattara – Ministry of Health of Burkina-Faso
E-mail: pnsbdaoi@fasonet.bf
Dr Benoît Varenne – AOI Burkina-Faso
E-mail: benoitvarenneaoi@msn.com

“Since 1995, “Aide Odontologique Internationale” AOI supports the National Ministry of Health in Burkina Faso in implementing the National Oral Health Plan in five provinces of the country’s rural southeast (covering about 1.5 million inhabitants). Since then, priority was given to preventative measures.

III. Reflections and questions of an international non-governmental organisation related to affordable fluoridated toothpaste

By Dr. Bernard Decroix and Dr. François Courtel

AOI is an international NGO that supports partners for oral health in 8 countries. For the last 20 years, AOI has encouraged reflection about appropriate strategies for oral health in developing countries.

The focus of AOI on the issue of affordable toothpaste evolved from contacts with universities and from various experiences in developing countries (notably in Burkina Faso, Cambodia and Vietnam).

Why is increased access to fluoridated toothpaste so important?

The protective role of fluoride on the teeth is well known. The World Health Organization (WHO) considers its widespread use to be the most efficient measure to prevent dental decay.

In areas of low natural fluoride levels in drinking water, several fluoride application techniques are used: fluoridation of drinking water, of salt, of milk, application by dental professionals or mouth rinses. However, most of these methods are not viable options for developing countries lacking of the necessary resources and infrastructure.

The observed significant reduction of caries rates in the last two decades is largely due to the use of fluoridated toothpaste. Most clinical trials showed a reduction by 20 to 30% in 2 to 3 year periods.

In many developing countries research about implementation of a minimum package of oral care is going on. The four components of this approach are emergency care
(oral urgent treatment OUT), exposure to fluoride through affordable fluoride toothpaste (AFT), oral health education and atraumatic restorative treatment (ART).

Fluoridated toothpaste has a major role in developing countries in reducing caries rates. However, in many countries and particularly in the less developed, these dentifrices are too expensive for the majority of the population.

**How can access to fluoride toothpaste be measured?**

There is apparently a great variation in access to fluoride toothpaste between different countries. It is important to be able to quantify and compare access, although there are actually no clearly established measurement indicators available.

Sales statistics of fluoride toothpaste could be a viable indicator (taking import, export and local fabrication rates into account). However, caution is necessary due to reliability of data and viability of statistics.

**What is currently the access level of fluoridated toothpaste in developing countries?**

The lack of indicators makes it difficult to get an objective picture on a global scale. In our experience, we noted certain tendencies and are encountering three different situational patterns:

**Situation 1: the least developed countries**

(i.e. Burkina Faso, Human Development Index HDI rank 172)

- Fluoride toothpaste is not affordable
- There are no local manufacturers
- International manufacturers are only very few
- The economic conditions are not favourable

**Situation 2: intermediate development level**

(i.e. Cambodia, HDI rank 136/Laos, HDI rank 140)

- Fluoride toothpaste is relatively affordable
- There are no local manufacturers
- International manufacturers are present
- The economic conditions are favourable (emerging market)

**Situation 3: higher development level**

(i.e. Vietnam, HDI rank 108)

- Fluoride toothpaste is affordable
- There are local manufacturers
- There is strong competition between international manufacturers
- The economic conditions are favourable (emerging market)

Whereas in a country like Vietnam the companies are engaged in a tough competition between each other, they seem to have less interest in the economic potential of a market like in Burkina Faso. Investments in such countries are therefore usually low and good quality fluoridated toothpaste is not available.
Partnerships between developing countries and multinational toothpaste manufacturers

Some developing countries have negotiated contracts with private companies allowing at the same time private support of public health programmes and promotion of the manufacturer's brands. Although numerous countries have adopted this scheme the modalities and results have been rarely reported.

To illustrate this situation we take the example of Southeast Asian countries. In some countries like Thailand and Vietnam these contracts between private companies and the Ministries are clearly defined. In Thailand, a partnership with Colgate in the framework of a school-based preventive programme has resulted in availability of fluoridated toothpaste in virtually all primary schools throughout the country. These toothpastes are sold at lower prices than on the public market and funds for oral health are implemented in every school. This approach is beneficial for all protagonists, a clear “win-win” situation.

In Vietnam, where the Oral Health Institute is responsible of the school-based preventive programmes, the partnership with Unilever and Colgate is also clearly defined. The areas of intervention are shared between the private companies, according to provincial areas.

In countries like Cambodia or Laos, this public-private partnership is less clear. If some companies have supported certain public health programmes, no long-term contracts have been signed, the partnership has not been well planned and the strategies used were inappropriate. However, in Cambodia negotiations for long-term commitments are currently undertaken and pilot projects have been established. In Laos, this type of partnership remains very limited, despite intentions of good will of public health authorities.

Public health responsibles in developing countries have to be aware of the inherent interests and limits of this type of partnerships. They also have to be sufficiently “armed” to negotiate in an equitable way with these companies. How to negotiate these partnerships? Is it better to have a monopole of one company or should a geographical divide between different companies and their support be preferred? How to share these experiences?

The private label brands

In India and China specialised companies have developed manufacturing personalised toothpaste brands. They produce affordable toothpaste and are exporting a lot to developing countries. But what about the quality of these toothpastes?

During a recent search visit to India we contacted five producers of “private label brands”. Most of them produced the toothpaste according to the demands and orders of wholesalers in the countries of exportation. According to these producers, African market wholesalers rarely order fluoridated toothpaste in order to reduce costs. Furthermore, practically all (4/5) admitted that they produced (on order of the wholesalers) fake products (so called “fluoride” pastes, that in reality do not contain any fluoride).

Having these facts in mind, how to deal with these brands? How to increase their
participation in the process of increasing access to fluoride toothpaste?

**Social Marketing**

Social marketing is an approach adapted and efficient for certain products in developing countries (see box). Some of the dental public health approaches used for to increase access to fluoride toothpaste are close to the principles of social marketing. Although the marketing side has not been fully developed, the WHO pilot project in Indonesia (1) has similarities. What exactly can social marketing bring to affordable fluoride toothpaste?
Social Marketing

The desire to make quality products affordable and to have a positive impact on deprived populations has led to the development of innovative approaches, i.e. the social marketing.

The concept of social marketing can be outlined as:

- Enable deprived communities to access high quality products or health services at affordable prices
- Promote these products and services with methods used in commercial marketing and IEC (Information, Education and Communication)

Social marketing has been used for several years and in most cases successfully. Many products sold in developing countries have benefited from this approach, i.e. preservatives, contraceptives and impregnated mosquito nets.

The organisation PSI (Population Services International, www.psi.org) is specialised in social marketing. The organisation has experiences in more than 40 developing countries and was successful in the fight against AIDS, Malaria and others.

An example may help to explain the approach. In Cambodia in 1994 the AIDS epidemic was in fast progression but preservatives were expensive and not accessible for large parts of the population. Additionally, international companies made no effort to change this situation. Therefore PSI created a new reasonable quality brand (“Number One”) and introduced it to the market at low prices. The product was free of taxes and was in parts financed by international funders. The promotion of the product was omnipresent using different partners (i.e. local markets, street vendors, NGOs, brothels). The sales numbers are now constant and the brand shares 80% of the national market in 2001 (68 millions sold in 7 years).

The quality of fluoridated toothpastes

Several investigations of toothpaste samples from developing countries demonstrated the need for increased quality control of fluoride toothpastes. Independent laboratories using standard methods should carry out the analyses (quantitative and qualitative analysis, verification of labelling standards, analysis of physical and chemical properties of the paste, analysis of bacterial contamination, the different charges and stability). Parallel to the quality assurance an effort should be given to certification of certain quality brands.

The credibility of introducing a new low-price brand on the market depends on the confidence of deciders and consumers in the product. A low price could be associated with low quality. Therefore quality assurance is an important issue as well as seals of quality approval.

Taxes and status of toothpaste: drug or cosmetic?

This is a complex question. If the toothpaste is classified as a drug it benefits of a tax-free status for importation. To obtain this status, a formal approval by the health authorities is mandatory and a complete application dossier has to be prepared. On
the other hand, the status as medicament limits the available distribution network because only pharmacies and related offices are allowed to distribute this type of product.

In Burkina Faso products like impregnated mosquito nets benefits of a “special status” granted by the Health Ministry. They exempt from importation taxes. To achieve this for toothpaste, political will and a well-prepared technical documentation are necessary.

**Conclusion**

The issue of affordable high quality fluoridated toothpaste in developing and least-developed countries is very complex. It is a challenge that needs increased concentration, exchange of experiences and involvement of universities, NGOs, politicians, manufacturers and international organisations.

Dr Bernard Decroix , AOI Paris

Dr François Courtel, AOI Cambodia

Contact : AOI, 16 Avenue de Villiers, 75017 PARIS – France -
E-mail : aoi@aoi-fr.org

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REFERENCES:


