

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 three 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.

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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 quality, fluoridated toothpaste is currently not assured for the majority of the population of Burkina Faso. There are two major reasons for this: the actual price and the extremely variable quality of available products.

Following a workshop on future preventive oral health priorities for Burkina Faso, the Ministry of Health decided to introduce a new affordable fluoride toothpaste to the country. 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 medications), Université René Descartes (Paris), WHO (World Health Organization) and local consultants (specialists in quality control, distribution, promotion of medical products or social marketing). A small pilot study on how to best promote and distribute a quality, fluoride toothpaste is currently under way and is scheduled for completion in July 2003.

The **search for toothpaste manufacturers** who could produce a quality, fluoride toothpaste affordable by the population of Burkina Faso was first oriented towards West African and European manufacturers. However, none of the manufacturers could provide a toothpaste at a cost that was deemed affordable. Toothpaste manufacturers were however identified in India. A questionnaire was drafted and sent to the manufacturers in order to evaluate the quality of their production and to obtain further information related to the production process. The collected information was evaluated and after a site visit to India, two manufacturers were selected.

An important aspect of fluoride toothpaste is the quality in terms of fluoride content, its sustainability and other factors. Quality will be monitored by the National Public Health Institute of Burkina Faso and by an independent European laboratory. Concurrently a personalized packaging of the toothpaste for Burkina Faso has been designed.

There are three alternatives for the **distribution of the toothpaste** in the country:

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

Negotiations are currently underway aimed at a reduction or elimination of tax for fluoridated toothpaste which meet certain quality standards. It is expected that the final sale price will be half of the price of 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 such as condoms and impregnated mosquito nets.

For the **promotion of the fluoridated toothpaste**, 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.

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*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 has been given to preventative measures.

III. Questions and reflections on affordable fluoride toothpastes by an international non-governmental organisation – making fluoride toothpastes more affordable and accessible

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 the necessary resources and infrastructure.

The significant reduction of caries rates in many developed countries observed over the last two decades is largely due to the use of fluoridated toothpaste. Most clinical trials have shown a reduction of 20 to 30% over 2 to 3 year periods.

In several developing countries research on the implementation of a minimum package of oral care is ongoing. The four essential components of this approach are emergency care (oral urgent treatment OUT), oral health promotion, exposure to fluoride through affordable fluoride toothpaste (AFT), 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 least developed, toothpastes remain too expensive for the majority of the population despite attempts by major toothpaste manufacturers to market lower cost, so-called affordable toothpaste. **Affordability must be determined relative to the targeted population otherwise accessibility suffers.**

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). These figures might not however be readily available to public health planners and even when available caution is necessary due to reliability of data and variability of statistics.

What is currently the level of access to fluoridated toothpastes in developing countries?

The lack of indicators makes it difficult to get an objective picture on a global scale. Based on the experience of our organisation, we have 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 and are not very interested in the market
- 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 tough competition between each other, they seem to have less interest in the economic potential of a market such as in Burkina Faso. Investments in such countries are therefore usually low and quality fluoridated toothpaste is not available.

Can partnerships between developing countries and multinational toothpaste manufacturers be a way forward?

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 certain 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 the 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 both 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.

Those responsible for public health in developing countries have to be aware of the inherent interests and limits to this type of partnerships. They also have to be sufficiently “armed” to negotiate in an equitable way with these companies. There are many questions that could be posed and no doubt the answers are country specific. How should one negotiate these partnerships? Is it better to have a monopoly of one company or should a geographical divide between different companies and their support be preferred? How to share these experiences? These are important questions which need to be addressed.

Private label brands, do they provide an affordable alternative?

In India and China companies manufacture toothpastes for private label brands. They produce toothpaste at a lower cost than western manufacturers and export to many developing countries. **But does low cost imply low quality?**

During a recent search visit to India we contacted five producers of “private label brands”. Most produced the toothpaste according to the demands and orders of wholesalers in the countries of importation. According to these manufacturers, African market wholesalers rarely order fluoridated toothpaste in order to reduce costs and increase profit. Furthermore, four of the five manufacturers admitted that they produced (on order of the wholesalers) “fake” products (toothpastes labelled as containing fluoride, that in reality do not contain any fluoride). **This points to the real need for the independent monitoring of the quality of toothpastes available in developing countries.** The manufacturers are however capable of and prepared to produce toothpastes with fluoride for only a small increase in the cost. Therefore, private label brands produced by non-multinational manufacturers provide an interesting alternative that is worthy of investigation.

How should fluoride toothpastes be promoted?

In many developing countries, the use of toothpastes is not part of the social culture. One reason has been cost, but if the cost issue can be resolved then how can one influence social culture so people purchase and use fluoride toothpaste. 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 toothpastes?

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, see website: 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 other debilitating diseases.

An example may help to explain the approach. In Cambodia in 1994 the AIDS epidemic was in fast progression but condoms 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 affordable, quality brand of condom ("Number One") and introduced it to the market at low prices. The product was free of tax and was in part financed by international fund organisations. The promotion of the product was omnipresent using different partners (i.e. local markets, street vendors, NGOs, brothels). The sale numbers are now constant and the brand shares 80% of the national market in 2001 (68 millions sold in 7 years).

How can one assure the quality of fluoridated toothpastes?

Several investigations of toothpaste samples from developing countries have demonstrated the need for increased quality control of fluoride toothpastes particularly with respect to fluoride content and stability under local conditions. Unfortunately in many countries there is no monitoring of the quality of fluoride toothpastes. It is therefore recommended that 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).

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. In order for the population to be assured that the toothpaste meets certain standards, it is suggested that a quality assurance certification, a "seal of approval" should only be given to fluoride toothpastes that meet appropriate standards for fluoride toothpastes. This could be through the country's ministry of health, an international dental organisation or perhaps even the World Health Organisation.

Taxation of fluoride toothpastes – a barrier to affordability and accessibility?

Currently in many developing countries toothpastes are considered as cosmetic products and therefore attract tax levels that can be up to 40% of the purchase price. This invariably will reduce the affordability and accessibility of the toothpaste to large sectors of the community. An alternative is to classify fluoride toothpaste as pharmaceutical product where it may benefit from 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. Conversely, the classification of fluoride toothpastes as a pharmaceutical product might limit the available distribution network because only pharmacies and related offices may be allowed to distribute this type of product unless special dispensation is permitted.

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

A tax reduced or exempt fluoride toothpaste could go hand-in-hand with a system of a “seal of approval”. A form of certification from an international health/dental organisation could go a long way to facilitate reducing taxes on toothpastes.

Conclusion

The issue of affordable quality fluoridated toothpaste in developing and least-developed countries remains complex. It is a very real and worthwhile challenge for the betterment of oral health that needs increased deliberation and exchange of experiences and involvement of universities, NGOs, politicians, manufacturers and international organisations through workshops and symposia. **It is strongly recommended that international health/dental organisations take the lead in putting affordable fluoride toothpastes on the global agenda.**

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