Delivering oral health information to the public is difficult, especially in underdeveloped countries. In Thailand, a group of researchers recently tried to assess whether a public educational programme with radio broadcast as the main educational media can increase knowledge about oral health as well as self-care behaviour among people living in remote rural areas. DT Group Editor Daniel Zimmermann spoke with Dr Duangjai Lexomboon, Associate Professor at the Department of Community Dentistry, Mahidol University, Bangkok, about the outcome of the project and how it was implemented.

Daniel Zimmermann: Dr Lexomboon, you are involved in a community oral health project run by Mahidol University. What can you tell us about the current state of oral health in rural communities in Thailand?

Dr Duangjai Lexomboon: The oral health status of people in rural areas is one of the prevailing problems in Thai dental public health. The problem is more evident in the young and the old living in remote rural areas, such as border regions. Most of the children of preschool age have dental caries. For example, in a Child Development Centre at which our project has targeted, which to increase knowledge of oral health and foster positive attitudes towards oral health, as well as to improve self-care behaviour at home.

When was the community health project set up, and what are its main goals and measures? In 1992, the Faculty of Dentistry at Mahidol University initiated a mobile dental service for schoolchildren and people living in remote rural areas. Six years later, the Royal Highness (HRH) conferred the service as the HRH Princess Sirindhorn Dental Mobile Project. This project is one of the main activities include participative prevention and education.

Initially, most of the activities were within schools and community. The main activities are presented as follows:

Meeting without dental problems. Therefore, little time can be allocated to prevention.

The schools in these areas are mainly border patrol police schools with police officers functioning as teachers and providing oral health education. Other than this, there are hardly any other sources of information on oral health and general health. At the same time, the lifestyle of those living in these areas has shifted towards increased risk behaviours, such as cariogenic snacking, creating a larger gap between the need for care and services provided.

When was the community health project set up, and what are its main goals and measures? In 1992, the Faculty of Dentistry at Mahidol University initiated a mobile dental service for schoolchildren and people living in remote rural areas. Six years later, the Royal Highness (HRH) conferred the service as the HRH Princess Sirindhorn Dental Mobile Project. This project is one of the main activities include participative prevention and education.

Initially, most of the activities were within schools and community. The main activities include participative prevention and education.

In Thailand, there is a major disparity in the distribution of dentists in rural and urban areas. Did the recent political unrest in Thailand have any impact on the programmes? Most people in remote rural areas are marginalised from central politics. Therefore, no great impact was noted in the past three years, not even over the last twenty years. If there is any change of government policy on budgeting for subdistrict organisation, there may be some impact but our programme has aimed to be mainly sustainable by the community itself. There is still need for further technical support through.

Amongst other measures, you have utilised radio broadcasting and posters to educate people in Ban Narao, a village in the Samut Sakhon district of the Chachoengsao province. Why did you choose radio, and how was the programme implemented? In this particular village, several of the community key persons came to us and suggested this channel. Most of the local people work on the farms all day and they like to listen to folk music. Only three to four radio frequencies reach the village, and the frequency we used is broadcast from a station within the village; therefore, meetings. After focus group discussions and meetings with teachers, health volunteers and community key persons, mass media education programmes, such as the distribution of posters and calendars with the pictures of the children in the village, and radio broadcasting were proposed as means by which to increase knowledge of and foster positive attitudes towards oral health, as well as to improve self-care behaviour at home.

In this particular village, several of the community key persons came to us and suggested this channel. Most of the local people work on the farms all day and they like to listen to folk music. Only three to four radio frequencies reach the village, and the frequency we used is broadcast from a station within the village; therefore, meetings. After focus group discussions and meetings with teachers, health volunteers and community key persons, mass media education programmes, such as the distribution of posters and calendars with the pictures of the children in the village, and radio broadcasting were proposed as means by which to increase knowledge of and foster positive attitudes towards oral health, as well as to improve self-care behaviour at home.
the signal strength is very good. Upon meeting with the station owner, a Catholic priest, we learned that he also wished to have messages about health broadcast on his station. He had some prior message clips received from other organizations, but these were lost when his computer was infected with a virus.

We had dental students produce 57 messages with varying content on oral health for audiences of all ages. Each message was two to four minutes long and was broadcast hourly between 8:00 and 19:00. The operator came to the station in the morning and selected and arranged the message clips into the schedule to be broadcast throughout the day.

We also used posters to support the campaign. Fifty posters were placed in community assembly areas, such as markets, community rice mills, churches, shops and restaurants. They were replaced with new ones after two months on display. The campaign was also promoted by the church.

**What was the outcome, and did you identify any significant change in oral health-care behaviour?**

We evaluated the campaign after four months. No increase in knowledge was identifiable from adolescents and government officers, who already had good knowledge on oral health care prior to the campaign. All other age and occupation groups, except shop owners and those not working, had increased knowledge. These two groups remained in the village during broadcasting time and might have been watching TV rather than listening to the radio.

The campaign was not able to improve people’s attitude towards the importance of primary teeth and self-care, but it increased awareness of the importance of a dental visit every six months. The percentage of those who brush their teeth before bedtime and after every meal increased significantly. Unfortunately, improvement in self-care behaviour was not observed in denture wearers.

**What conclusions did you draw from these results?**

For remote rural areas with limited access to health information, the public educational campaign with simple and repeated messages through the radio programme showed an initial increase in dental knowledge but no improvement in the attitude towards self-care. There was increased self-care amongst dentate persons but not amongst denture wearers.

**What recommendations would you give to communities who wish to implement similar measures?**

In order to implement similar public educational campaigns, the media that is consistent with what local people already view or listen to in their daily lives has to be identified. In order to change self-care behaviour amongst denture wearers, a clearer message, longer intervention time, and additional motivation methods may be indicated.

For the sustainability of the programme, we suggest radio programme operators produce their own message clips. This could be incorporated into school pupil activities by having them download content from web sites such as the Faculty of Dentistry or the Ministry of Public Health.

It is important to note that for public oral health programmes for people living in rural areas to succeed these have to be in-line with their interests.

**Thank you very much for this interview.**

---

**NobelProcera™**

Full zirconia product assortment in four colors.

Certified for excellent material homogeneity and purity

Innovative coloring technique

Excellent flexural strength and no degradation in strength compared to white zirconia* light colored

Excellent esthetic results supported by the coloring of the underlying framework

light colored intense colored

* Nordic Institute of Dental Materials (NIOM) NobelProcera™ Zirconia testing: S306205B, S306206B.

**Products for NobelActive™ platform are currently under development.**

For more information, contact a Nobel Biocare Representative at 1-800-22-9998 or visit our website. www.nobelbiocare.com/nobelprocera

Nobel Biocare Asia +852 2946 1208, Nobel Biocare Singapore +65 6737 7987, Nobel Biocare Taiwan +886 2 2793 9933 © Nobel Biocare 2009