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 pre-school age have dental caries. For example, in a Child Development Centre at which our group has been implemented, the caries prevalence in three-year-olds is as high as 76 per cent, with a mean DMFT of about five teeth per child; and the situation is even worsening rapidly. Nearly 70 per cent of five-year-olds have dental caries, with a mean DMFT of eleven teeth per child. Amongst the elderly, most have lost the majority of their teeth to periodontal disease and only a small percentage of them wear prostheses.

How does this situation differ from that of the cities?

People living in urban areas also have comparatively high levels of dental caries and periodontal disease; however, a much higher percentage of these people have restored teeth or prostheses, which is mainly because of better access to care and health information.

In Thailand, there is a major disparity in the distribution of dentists in rural and urban areas. Our government has been trying to solve this problem through various strategies, such as compulsory contracts for all dental graduates to serve in rural areas, incorporating community dentistry into dental curricula, and financial incentives. The situation has improved in the past twenty years, but the most remote rural areas, which our project has targeted, are still greatly underserved. There are neither dental clinics nor hospitals within close proximity. In the majority of health centres in these areas, there is only one dental nurse who has take care of not only oral health problems, but also general health 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 about oral health and general health. At the same time, the lifestyle of those living in these areas has shifted towards increased risk behaviours, health 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 1999, the Faculty of Dentistry at Mahidol University initiated a mobile dental service for schoolchildren and people living in remote rural areas. Six years later, HRH Princess Sirindhorn Dental Mobile Project. This project is one of HRH's child developmental programmes in border-patrol police schools throughout the country.

These activities were extended later to include fabricating removable acrylic dentures, presenting oral health education, and conducting research projects. In 2005, the Faculty in collaboration with the Faculty of Public Health launched oral health promotion activities under the programme the Development of Oral Health Promotion Model in Remote Rural Areas in two villages.

The main goal of this programme is to develop an oral health-care model that is effective, relatively low cost, acceptable by local people through community participation, and thus intended to ensure sustainability. The objectives are to increase dental literacy, prevent dental caries and periodontal disease, and foster a self-care approach within the community. The main activities include participative prevention and education.

Initially, most of the activities 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.

“We 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 two years. If there is any change of government policy on budgeting for sub-district 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 though.

“Amongst other measures, you have utilised radio broadcasting and posters to educate people in Ban Narao, a village in the Sanam Chai Ket 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,
the signal strength is very good. Upon meeting with the station owner, a Catholic priest, he learned that he also wished to have messages about health broadcast on his station. He had some prior message clips received from other organisations, 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.

Tooth brushing after lunch with well water.

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DENTAL TRIBUNE Asia Pacific Edition Trends & Applications 27