One of the primary ways in which oral health can impact the quality of life is through its economic burden. In Europe, traditional curative treatment accounts for 5–10 per cent of total public health expenditure. The Platform for Better Oral Health in Europe forecasts that the total cost will rise from €54 billion in 2000 to €93 billion in 2020. Oral diseases are the fourth most expensive to treat, according to the World Health Organization, and this financial aspect can hinder people of lower socio-economic standing in receiving appropriate care.

The prevalence of caries and other oral diseases is a worrying trend, especially given the increased knowledge of how oral health can be maintained through twice-daily brushing with a fluoride toothpaste, a healthy diet and regular dental check-ups. In the Netherlands, for example, a commonly implemented programme to prevent caries among children involves twice-yearly check-ups that are often accompanied by an application of fluoride and the sealing of all visible fissures. This programme is covered by the country’s health insurance and is thus free for all children up to 18 years of age, ensuring that there is no financial disincentive. In spite of this progressive and egalitarian approach, the proportion of Dutch youths without any caries experience has not dropped over the last 30 years and has remained stable.

It was clear from this that an alternative approach to caries prevention needed to be tested. Working from the basis of a study conducted in Denmark, a group of dental researchers in the Netherlands tested a non-operative caries treatment and prevention (NOCTP) programme with a pool of 6-year-old children. This programme, which promoted recall intervals based on individual risk assessment, resulted in a 40–70 per cent reduction in caries for the group subjected to the NOCTP method.

Prevention spoke with Corrie Jongbloed-Zoet, President-elect of the International Federation of Dental Hygienists (IFDH), about how the principles of these scientific studies are applied to a programme implemented by Dutch society for the promotion of oral health ‘Ivoren Kruis’ (Ivory Cross) and the impact these studies may have on approaches to caries prevention throughout Europe.

What are the principles upon which the NOCTP approach is founded, and how do these differ from conventional caries prevention approaches?

NOCTP is based on individual risk assessment, extensive oral hygiene instruction and education, and parental home care. In contrast, we have the regular (Dutch) protocol that is based on dental check-ups twice a year, fluoride application and sealants and if necessary restoration of caries on the dentine threshold.

The protocol is based on the understanding that caries is a localised process that can be prevented by brushing with a fluoride toothpaste. Extensive oral hygiene instruction and education are given and recall intervals are made on an individual basis using the following criteria: the cooperation of the parents, the activity of carious lesions within the dentition, the eruption stage of permanent molars and carious activity affecting the occlusal surfaces of the first permanent molars. Unfortunately, we see a great deal of very progressive carious activity in primary dentition and in first molars, especially among young emigrant children and in lower socio-economic income groups.

Could you please take us through the protocol of the Ivoren Kruis’s Gewoon Gaaf programme?

The first appointment is made with a dentist or a dental hygienist and is followed by a demonstration of visible plaque and the impact these studies may have on approaches to caries prevention throughout Europe.

Could you please take us through the protocol of the Ivoren Kruis’s Gewoon Gaaf programme?

The first appointment is made with a dentist or a dental hygienist and is followed by a demonstration of visible plaque and education and training in plaque removal by the patient and motivational interviewing. After professional plaque removal, a diagnosis is made and the treatment continued. In the case of no...
Caries progression, a risk and interval assessment is determined. In the case of caries progression, treatment, education and training are followed by fluoride application, sealing or restoration.

**Step 1** During the first visit, the patient and his or her parents are informed about the programme and asked about their motivation to participate, problems, previous experiences, fear, stress, etc.

**Step 2** After disclosing of the plaque, the level of oral hygiene and self-care is noted—plaque index—followed by information and instruction. The patient or his or her parent is asked to remove the plaque him- or herself.

**Step 3** The next step in the NOCTP protocol is professional cleaning.

**Step 4** A very important factor for risk assessment is the diagnosis of caries activity: small pits and severe caries.

**Step 5** The next step is motivational interviewing, which is the key to success. The patient is prepared for implementing change and this might need multiple sessions. If the patient is ready to change, he or she is instructed—through explaining, showing and doing—and motivated and coached, with the intention that he or she will change his or her attitude towards oral health and his or her behaviour.

**Step 6** If necessary, fluoride is applied on white spots or areas difficult to reach with a toothbrush. If the patient is not able to reach erupting molars with a toothbrush, sealants are applied to these and only if necessary.

When it comes to the prevention of caries in children, what role do parents’ attitudes play?

The programme focuses on behavioural change: the patient and/or his or her parents are encouraged to take responsibility for his or her oral health. In the study, the parents’ attitude turned out to be a decisive factor. There are parents who are conscious and responsible, but there are also parents who are trivialising and fatalistic, appearance-driven and open-minded, knowledgeable but defensive, or conscious and concerned. The health care providers are trained over several days to be familiar with these differences and to consider them in their approach towards the patient’s parents. After informed consent has been obtained, parents are asked to fill in a questionnaire to provide information on socio-economic circumstances, oral hygiene habits, oral health history, dietary habits, self-care routines and knowledge on dental topics.

What role does the IFDH play in the promotion of oral health in Europe?

The IFDH is an international non-governmental organisation registered in the US. It unites dental hygienist associations from around the world (32 countries) in their common goal of promoting oral health and preventing oral disease. The federation represents approximately 85,000 dental hygienists. All European countries where dental hygienist associations exist are members of the IFDH and of the European Dental Hygienists Federation (EDHF). The IFDH and EDHF work together towards their common goal of improving oral health worldwide with partners like the Alliance for a Cavity-Free Future, the Global Child Dental Fund and the Platform for Better Oral Health in Europe.

References: