Oral hygiene instructions and patient motivation with and without dental hygienists

An interview with Dr Eric Thevissen, periodontist and pioneer of Belgian prophylaxis

Dr Thevissen, I wanted to talk to a dental hygienist in Belgium. Why is that not yet possible?

Dr Eric Thevissen: Well, the good news is that, from June 2019 on, it will be possible to visit and talk to a dental hygienist in Flanders. Why Flanders has waited such a long time to start the education and training of dental hygienists is politically motivated and due, in large part, to the representative dental associations. Belgium has a long tradition of one-dentist clinics, often working without dental assistants. Since the introduction of a quite difficult admission exam for dentistry in 1997, the discipline has attracted fewer students. As a consequence, the number of graduating students has dramatically decreased, while the demand for dental care is continually increasing. Slowly, but surely, more and more group practices have emerged, hiring dental assistants. Back in 2006, the first meetings were organised between universities and dental societies about the qualifications needed to become a dental hygienist and the tasks that could be delegated to them. As always, there were proponents and opponents, and it took a very long time before all stakeholders agreed on the conditions and criteria needed to start dental hygienist training in Leuven and Ghent.

Let’s talk about your study “The provision of oral hygiene instructions and patient motivation in a dental care system without dental hygienists”. Please tell us more about it.

Thirty years ago, I started working as a periodontist in Hasselt with another colleague. Since we were the first periodontists in this province, we had a flying start. After a few years, I noticed that dentists were always referring patients to our clinic with the same complaints, such as bleeding gingivae or bad oral hygiene. In my opinion, treating bleeding gingivae or giving oral hygiene instructions is the duty of every dentist and belongs in the sphere of primary dental care rather than in secondary or specialist care. Although we organised courses where a general dental practitioner (GDP) could learn about patient instruction and guidance, I realised that we were considered by a large number of GDPs to be dental hygienists rather than periodontists. The truth was that we were both, periodontists and dental hygienists. This annoyed me because I knew that in neighbouring countries periodontists could spend their precious time on the work they were trained for.
In 2004, I took the initiative to set up a pilot study in Li- 
burg with 65 referring dentists. We used the Dutch Peri-
odontal Screening Index, a screening test for periodontal 
status that had been introduced in the Netherlands a few 
years earlier. We collected data from 814 patients. The re-
results clearly showed that the screened age groups had, on 
the whole, periodontal problems and that there was a high 
need for treatment.

Around the same time, Prof. Hugo De Bruyn joined the 
teaching staff of Ghent University’s Department of Dental 
Sciences. Probably thanks to my publication, he asked me 
to become one of his staff members. Working with Prof. De 
Bruyn, one is quickly involved in clinical research and so 
I had the opportunity to investigate, in depth, the questions 
that had bothered me ever since I started my career. One 
of these questions was the kind of oral hygiene instructions 
GDPs provide to their patients.

Using questionnaire responses of 776 dental profession-
als gathered for various postgraduate courses in Flanders,
we were able to determine that, given the absence of dental 
hygienists in Belgium, oral health instructions and patient 
motivation appeared to be non-compliant with international 
guidelines. Though dental professionals were concerned 
with prevention, there were several mitigating factors work-
ing against them delivering this adequately.

The study mentioned lack of time, remuneration and 
patient interest as complicating factors for the provi-
sion of preventative care. However, qualification, work 
experience and time are crucial for providing oral hy-
giene instructions and patient motivation. Can dental 
hygienists be seen as a solution to these problems?

It is my conviction that dental hygienists are the solu-
tion to these complicating factors. Prophylactic care will 
be the main target of their work, since dentists are primar-
ily trained for restorative care. Owing to factors such as 
the decreasing number of graduating dental students, the in-
creasing number of retiring dentists in the next ten years,
an ageing population and a higher demand for preventative 
care, the stress of work increases and forces dentists to 
manage their work time more strictly. Of course, GDPs pre-
fer restorative and other more rewarding treatments. We all 
know how time-consuming patient motivation techniques 
for behaviour change can be. There is no dentist prepared 
to spend that time on preventative care. Generally speak-
ing, dentists are used to giving a basic package of infor-
mation on oral hygiene to every patient and, depending 
on compliance, they may want to spend more time on pa-

tient guidance. Here, dental hygienists can make the dif-
ference. They will be trained to insist on the importance of 
behavioural change and will take the time to explain and 
show how to perform proper home oral care.

You have also published studies on implants, such as 
on implant design. What made you publish your study
titled “Attitude of dental hygienists, general prac-
titioners and periodontists towards preventive oral 
care: An exploratory study”? You could have just con-
tinued with your research on implant systems.

Indeed, the team around Prof. De Bruyn is very driven 
by and focused on the outcome of implant therapy. To my 
knowledge, the Department of Dental Sciences at Ghent 
University published around 40 scientific articles in 2016,
the majority of which are related to implant therapy. The 
subject of my PhD is not implant-related, but deals with 
different relationships in dentistry: between the patient and 
the dental professional, and between primary and second-
ary dental care, that is between GDPs and specialists.

What were the objectives and results of this study?

This second study was a step further than the first one. In 
the first study, we looked for an explanation for the dif-
ferences in patient motivation techniques between Flemish 
GDPs and periodontists. In this second one, we compared 
our rather unique Belgian system with the Dutch system, 
a completely differently structured healthcare system in-
cluding dental hygienists. We wanted to know if the Dutch 
system represented the gold standard and how we were 
situated in Flanders.

The results showed that periodontists and dental hygien-
ists shared more common viewpoints than GDPs and hy-
gienists did. What was remarkable was the fact that more 
than 80 per cent of periodontists and dental hygienists 
satisfied with their efforts in informing and motivating 
patients, compared with 38 per cent of GDPs. Secondly,
whereas GDPs indicated nurture as the factor most con-
tributing to the oral hygiene level of the patient, periodon-
tists and dental hygienists focused on the influence of the 
dental practitioner and a patient-centred approach. In our 
multivariate analysis, the presence of chairside assistants 
seemed to be of major importance.

But, as always in questionnaire-based studies, the re-
results can be biased by socially desirable answers and by 
the inevitable structural differences between Belgium and 
the Netherlands. One of these differences, for example, is 
the fact that providing oral hygiene instructions is not reim-
bursed in the Belgian dental care system, as it is not con-
sidered an autonomous activity.

What should the role of the dental practitioner in the 
successful treatment of periodontal disease be? What 
does the patient need to do?

The role of the dental practitioner, in particular the GDP, 
undoubtedly remains to keep a panoramic oversight over 
everything that has to do with the dental and oral health of 
the patient. Especially considering the introduction of den-
tal hygienists in the near future in Belgium, the dentist’s role 
as a supervising manager is important. It is my experience 
that progressive problems often remain untreated until 
complications or even complaints surface. A trigger seems
to be needed to make the idea of treatment approachable or acceptable. Unfortunately, waiting for this trigger often leads to the loss of the tooth instead of its repair.

From the patients’ point of view, I am convinced that some of them insist on not being treated for things they do not complain about, as they see these treatments as unnecessary.

If I personally have to undergo an annual medical check-up, I would hope that all the exams needed are performed, as this will set me at ease. Why then does this appreciation not apply to oral health?

What are some of the oral hygiene instructions and patient motivational actions that you would recommend?

Thanks to research and clinical findings, lifestyle habits, genetics, stress, hygiene, medication, age, nutrition and different systemic factors have been shown to accelerate the development of periodontal disease in the presence of biofilm, activated by a hyperactive or even a hypo-reactive immune system response. It is a fact that this sort of risk analysis has become part of the graduate curriculum, including counselling on healthy food habits or how to quit smoking, detecting periodontal risk through assessment, using caries detectors, and so on.

Firstly, the patient should demonstrate his or her home care habits using his or her own toothbrush. We distinguish four levels of patient information needs: the lowest level is the patient who is almost totally ignorant about proper home care; the second level is the patient who brushes his or her teeth on autopilot without paying attention to any technique, time duration or interdental cleaning; the third level is the patient who regularly cleans even the interdental spaces, but unfortunately not frequently enough or not with adequate instruments; and finally, the fourth level is the patient who performs extremely well and needs none or only minor adjustments, for example tongue brushing.

In accordance with the technique of motivational interview, we build up a conversation with the patient while giving instructions, waiting for approval, repeating and counselling. One needs two or three control sessions to check his or her dexterity and oral cleaning performance. Plaque disclosure remains a confronting but very effective tool to show the results of the patient’s cleaning habits.

Finally, the dental professional should show enthusiasm and keep on repeating until there are visible improvements.

From your point of view, does the dentist spend enough time on the diagnosis of a disease?

Of course, dentists are dutiful people who are concerned with their jobs. Spending time to ensure correct diagnosis is their core business. Examining patients means exploring and looking for mostly hidden troubles or discomforts.

The next question is the most important one: is this problem acute enough that it should be treated immediately, in the very near future, or can we wait and see how it develops? This is risk management and it is dependent on multiple factors.

Often, prevention is neglected in dental practices in favour of diagnosis and restorative treatment. How can dental professionals implement prophylaxis in their daily practice, especially primary prophylaxis?

I would say, rather, that prevention is not neglected. Sixty-five per cent of GDPs provide information about oral hygiene as a standard procedure. Depending on compliance, the GDP may decide to spend more time on patient guidance. This requires delicacy, as one cannot tell from a patient’s face how motivated he or she is, nor what he or she is interested in. This is not often asked of the patient, so one could rather say there is not enough time spent on communication.

I invite practitioners to do an experiment in their waiting rooms. While the patient is waiting for his or her appointment, he or she can be given a short questionnaire asking him or her to write down in a few words his or her understanding of proper home care and his or her personal ritual. The patient can then be asked if he or she would be interested to know more about it. We use this method in our clinic. In the waiting room, patients have time to reflect and one might be surprised at how interested patients really are if one gives them the opportunity to communicate and to prepare their questions in advance.

To be honest, I think that primary prophylaxis is impossible to achieve because we do not control all the influencing factors, of which some can be health- or patient-related. It means that we need to try to prevent people from developing caries or periodontal disease. This is somewhat futile, since caries and periodontal disease are the most widespread infectious diseases present in almost every patient. Twenty-five per cent of 5-year-old children have bleeding gingivae, and this figure rises to 55 per cent for 15-year-olds. Primary prevention is like placing speed cameras on highways: it works all the time and for everyone, it is highly effective and inexorably justified. Today, I heard in the news that, thanks to these speed cameras and other regulations, the number of persons killed by traffic every year is diminishing. This is primary prevention. However, I strongly believe in secondary prevention; it is the dentist’s duty to examine and to intervene, preferably before detrimental clinical signs occur.

How important are home care and high-quality oral hygiene products such as those of CURAPROX?

It is a fact that oral hygiene devices are not considered as pharmaceuticals and they therefore don’t have to be thoroughly tested. If a company designs a nice, good-looking toothbrush, it is allowed to produce it and sell it, even if the
brush does not meet the criteria desired in an effective toothbrush.

Comparing the oral hygiene products from different companies, we see a variety of designs and features. This is interesting because there is no such thing as the perfect interdental brush. There are always compromises to make and what some patients like, may be rejected or disapproved of by others. We as dentists have only an advisory, consultative role.

Nevertheless, CURAPROX makes Swiss-quality products designed by dental professionals, and the company is willing to listen to advice on how to improve its products.

What is the status of dental hygiene in Belgium? In other words, how does the Belgian mouth look?

When I go abroad to congresses and meet with peers, I feel their displeasure when they hear that I come from Belgium. The first thing I am asked is, how can you treat periodontal disease without a dental hygienist? For them, it is like having bars and pubs, but no beer.

I have read some articles in which the decayed, missing and filled teeth and decayed, missing and filled surfaces scores of children were compared between different European countries. Though Belgium was not top of the class, it wasn’t at the bottom either. In articles from the US, it is reported that, at 30 years of age, 25 per cent of the American population have mild periodontitis, 60 per cent have chronic periodontitis and 15 per cent have aggressive periodontitis. This is exactly the same breakdown as in Europe. The question is not about whether dental hygienists are necessary; the question is, what percentage of the population do dentists reach and can afford to go to a dental hygienist on a regular basis? Despite all this, we seem to be able to manage the periodontal situation in Belgium and this was one of the reasons for the second study.

Does the addition of dental hygienists make financial sense or does prophylaxis make financial sense for the dental practice if the practice already makes good money with implants?

I understand your point of view that, in the perfect world of prophylaxis, dental implants have no place because everything should be done to prevent implant treatment.

I remember Prof. Jan Lindhe saying that, nowadays, too many treatable teeth are extracted to be replaced by dental implants. As a periodontist I agree with Prof. Lindhe; a dental implant is an effective instrument to rehabilitate edentulous areas, but only after all other options have been considered. But often life decides differently, and at Ghent University, I see a lot of young people seeking dental care because of, for example, fracture of one or more of the front teeth owing to biking and other kinds of accidents, sometimes under the influence of alcohol or drugs. These students don’t want to wear removable dentures for life.

With respect to the first part of the question, of course the addition of dental hygienists makes financial sense. The purpose is to relieve dentists of those tasks that can be delegated to auxiliary staff. Secondly, dental hygienists will be trained to communicate with patients about their problems and questions. Delegating prophylactic care to the dental hygienist implies that more patients can be treated and followed up on. We also must not forget patients who live in nursing homes. Since nurses are not allowed to provide dental treatment, we are glad that, in the near future, dental hygienists will be available to give these people the necessary preventative care.

What kind of prophylaxis does the Belgian dentist perform in the office? How much time do you devote to prophylaxis?
Supposing that patients go to their GDP on a yearly basis, supragingival scaling and scaling of shallow pockets is standard procedure. The Dutch Periodontal Screening Index is a perfect tool to screen patients for periodontal disease and treatment needs, but this index is unfortunately not yet applied widely enough, even though it is reimbursed. If a GDP remarks that the gingivae bleed easily or if the patient complains about periodontal infection, then the periodontal probe is used and the patient will eventually be referred to a periodontist.

UC Leuven-Limburg and Artevelde University College (in Ghent) are offering a new professional bachelor’s degree programme in dental hygiene. Is that a breakthrough? It certainly is. It is a pity that this programme is not yet offered in the French-speaking part of Belgium. Let’s hope they will follow with us as soon as possible to ensure the levelling of our nation’s dental care. Since Leuven and Ghent are the only Flemish universities where the dental graduate curriculum can be followed, it is logical that dental hygienists will be trained at those same universities, and that both professional groups will start to work together at chairside from trainee level onwards.

When looking at your Dutch neighbours, what do you think should be replicated in Belgium? In the Netherlands, they have more than 50 years of experience with dental hygienists. This profession is well represented and has a strong, hardworking and lobbying society. We in Belgium have always respected and admired the pioneering way of organising dental care in the Netherlands. Although tough discussions have had to be conducted, they have always reached a consensus. Today in the Netherlands, up to ten different levels of dental professionals are distinguished, from specialists to dental assistants. I don’t think we will ever see this development in Belgium.

The advantage of us being behind is that we can copy the best things that have proven to be solid and to work, and delay the more complex or risky things until we see how it works out there.

I hope that dental hygienists will integrate easily into the dental workplace and that their future will be as bright as it is in the Netherlands.

Finally, where do you see the future of Belgian dentistry? When I graduated in 1986 as a periodontist I had two dreams, the first of which was the official recognition of our diploma as a specialist in periodontology and oral implantology. This dream was only fulfilled in 2003. My second dream was that dental hygienists would be legalised to work in Belgium, and as you know, this will also become true from 2019 onwards. So, the future is bright. I fortunately did not mention how long it would take before my dreams would be fulfilled!

Looking back to ten years ago, taking digital impressions with oral scanners was still a utopia; there were no navigation systems available for implant therapy, and we did not yet have these composites with hydroxyapatite nanoparticles. Dentistry has evolved in such a rapid way that the future is today.

However, in my opinion, the evolving trend towards cosmetic dentistry is almost alarming. There is nothing wrong with the high demand for aesthetic dental treatments because it has been proven that these patients show more compliance in cleaning their teeth, but there is a tendency towards the belief that appearance is more important than function. Many patients prefer whitening their front teeth to periodontal treatment to save natural teeth. While they argue about periodontal therapy not being reimbursed by the healthcare system, this point is not raised when they seek aesthetic dental care.

Another rather regrettable observation is the fact that stock-market-listed companies invest in dental clinics and hire dentists as employees. Of course, this is a sign of the times. Being the manager of a group clinic today has turned into a full-time job that has almost nothing to do with dentistry. Let’s hope that the financial management of these clinics is not more important than the patients and that the dentists working in the system still feel the same responsibility towards their patients.

Thank you very much for the interview.