

# Experienced barriers and facilitators for integrating smoking cessation advice and support into daily dental practice. A short report

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## IN BRIEF

- Training on counselling techniques and motivational interviewing diminishes dental professionals' anticipated perception of the possible resistance of patients.
- Periodontal treatment and the presence of smoking-related diseases can be used as a way into smoking cessation discussions.
- Promoting the use of structured advice and counselling protocols is a good strategy to increase dental professionals' involvement in prevention of tobacco addiction.

In a controlled study, primary care dental professionals in the intervention group were encouraged to provide smoking cessation advice and support for all smoking patients with the help of a stage-based motivational protocol. The barriers and facilitators reported by the dental professionals on two occasions for their efforts to incorporate smoking cessation advice and counselling into daily patient care are summarised here. Lack of practice time and anticipated resistance on the part of the patient were cited as barriers by over 50% of the dental professionals in the first interviews. Periodontal treatment and the presence of smoking-related diseases were mentioned as the most important stimuli. The experience-based interviews revealed key points for the implementation of smoking cessation advice and support in daily dental care. Education on the associations between smoking and oral health, vocational training on motivational interviewing and the offering of structured advice protocols were identified as promising components for an implementation strategy to promote the involvement of dental professionals in the primary and secondary prevention of tobacco addiction.

## INTRODUCTION

Smoking is one of the leading causes of early death. The relationships between smoking and lung cancer or coronary heart diseases are generally known, but less is known about the associations between smoking and oral health problems. Smoking contributes to the onset of oral cancer, increases the occurrence of periodontitis<sup>1-3</sup> and raises the risk of periodontal attachment loss and the formation of periodontal pockets as well as alveolar bone loss.<sup>4,5</sup> Smokers experience more dental implant failures, and smoking is also related to poor wound healing. Finally, smoking discolours teeth.<sup>1,6</sup>

Interventions to prevent smoking behaviour and to encourage smoking cessation can contribute to significant health gains. Five years after smoking cessation, for example, the chances of developing oral cancer are equal to those for never-smokers.<sup>1,7,8</sup> For this reason, guidelines for the treatment of tobacco addiction recommend that dental professionals inform their patients of the negative health effects of smoking, actively encourage patients to stop smoking and provide support for patients who attempt to do this. Dental professionals (that is, dentists, oral hygienists and practice assistants) are also called upon to play an important role in the primary and secondary prevention of tobacco addiction.<sup>9</sup> As part of the provision of ongoing oral health care, dentists and oral hygienists see patients on a regular basis,<sup>2,10</sup> which gives them ample opportunities to provide smoking cessation advice and counselling.

Despite these recommendations and opportunities to provide smoking cessation advice and support, dental professionals only do this to a very limited extent. In many studies, the presumed barriers to the integration of smoking cessation advice

and support into the daily care practices of dental professionals are mentioned.<sup>11-13</sup> Very little is known, however, about the actual barriers and facilitators experienced by dental professionals in the area of smoking cessation advice and support. A carefully controlled, empirical study was thus undertaken to encourage primary care dental professionals to use a stage-based motivational protocol to provide more smoking cessation advice and support for all smoking patients. The present report reviews both the barriers to and facilitators of the incorporation of stage-based motivational smoking cessation advice and counselling protocol into the daily practices of the dental professionals in the intervention group of the controlled trial.

## METHODS

### Intervention

A smoking cessation protocol was introduced in 23 primary care dental practices in the Netherlands in 2008 (see Figure 1). Practices could choose between a minimal or optimal version of the protocol (that is, between brief advice to patients visiting the practice for a periodic oral

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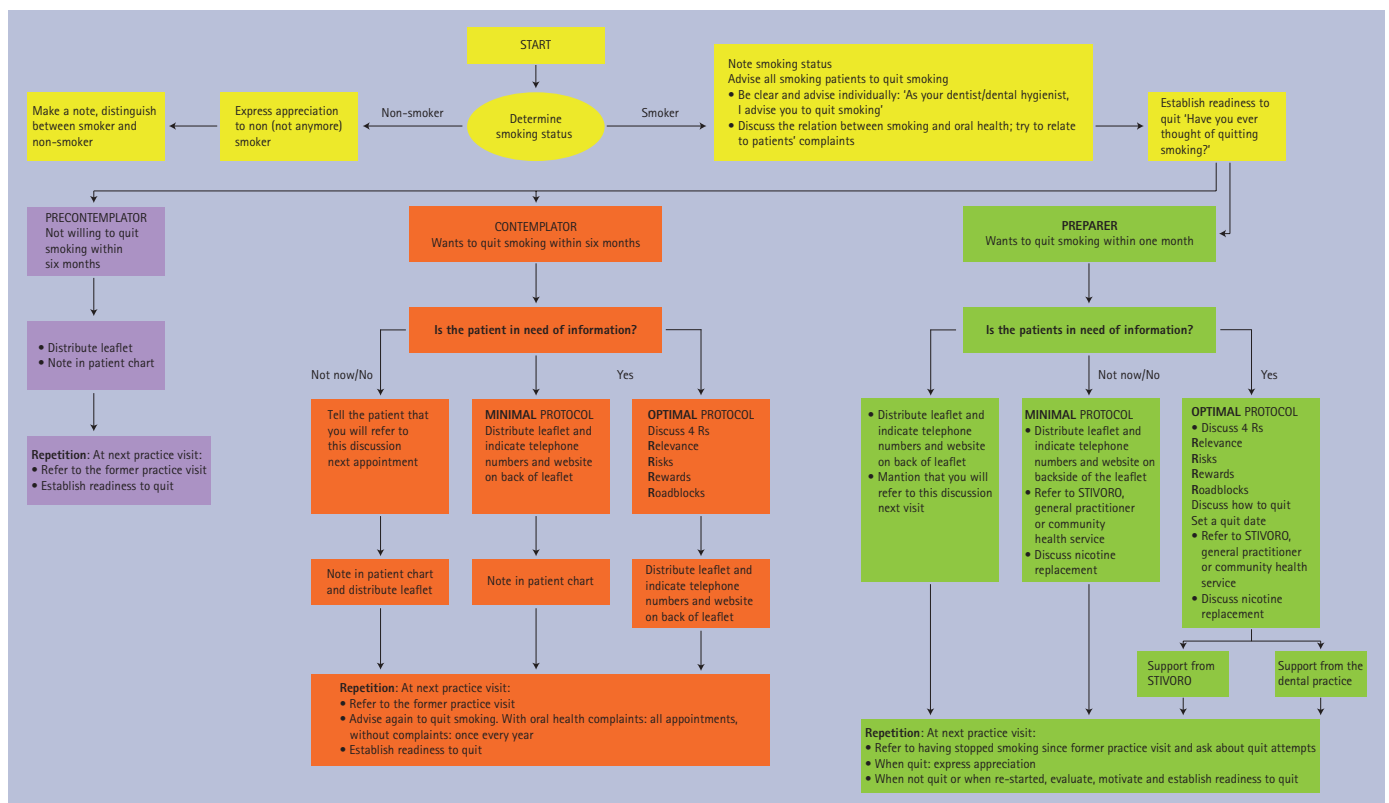


Fig. 1 Advice protocol (version translated from Dutch)

examination or extended counselling in addition to brief advice).

The focus of the minimal protocol was asking and advising patients, including brief advice and no follow-up. This means that smoking patients were only asked whether they smoked and if so, were advised to quit but they were not asked to come back or to set a quit date.

As part of the optimal protocol, the dental professionals were expected to influence the patient's motivation to quit smoking: for example, by discussing the pros and cons of quitting and the perceived barriers to and facilitators of behaviour change and encouraging the patients to set a quit date. Follow-up was expected either by phoning the patient or arranging a second patient visit or by gaining the involvement of the proactive quit line from the national Dutch Organisation for Information on Smoking and Smoking Cessation Counselling (STIVORO). The motivational stages to be acted upon were divided into three categories: precontemplation or not willing to quit, contemplating quitting and preparing to quit. Tips and examples of questions to initiate discussion during the different motivational stages of smoking cessation were given to the dental professionals on the reverse side

of the one-page advice protocol as well as information on the advantages of smoking cessation and the pitfalls to be avoided.

The advice protocol is intended to guide daily dental practice and be easy to use. All practices were also given patient information leaflets addressing the oral health consequences of smoking. To support the implementation of both the minimal and optimal versions of the protocol as described above, education and feedback were provided as well.

All practice team members received group training given at four central places in the Netherlands at the beginning of the study. This was done shortly after an initial questionnaire was sent out to collect information on the practices. The central group training included exercises for motivational interviewing and role playing.

During two randomly selected weeks (in months 1 and 6), all smoking patients who visited the practices (425 and 267 smokers for the two months respectively) were asked whether they had received smoking cessation advice and support. The outcomes were summarised and presented to the dental team in the form of a feedback report.

The practices were visited by the researcher on two occasions shortly after presentation of the feedback reports to

discuss the information in the reports and also any perceived barriers and facilitators in using the protocol.

### Data collection and analysis

In semi-structured interviews conducted during the feedback visits the dental professionals were asked about the barriers and facilitators they experienced in the application of the smoking cessation advice and counselling protocols. The responses were noted and descriptive analyses were conducted using SPSS 16.0. The responses were found to concern one of four categories: practice organisation, professional characteristics and capacities, relationship with patients and patient factors.

### Study population

From 23 primary care dental practices, 31 dentists (61% male, mean age of 45.7 years (SD = 10.4) with a mean of 18.4 years of practice experience (SD = 10.0)) and 32 dental hygienists (100% female, mean age of 32.2 years (SD = 6.2) with a mean of 4.9 years of practice experience (SD = 3.3) were included. The dental professionals were recruited using the file of all registered dental practitioners from the Dutch Dental Association (NMT) and the file of all

registered oral hygienists from the Dutch Dental Hygienists' Association (DDHA). The sample of dental practices was representative of Dutch primary care dental practices in terms of team composition and the average number of patients seen per week. Table 1 describes the samples of smoking patients seen in the two weeks to raise the feedback figures.

## RESULTS

The majority of the practices opted to work with the minimal advice protocol. The optimal advice protocol which included smoking cessation counselling for dental patients was selected by only five of the 23 practices. Three of the practices that opted for the optimal protocol reported referral of the relevant patients to STIVORO, although the number of patients reporting referral was very low ( $n = 8$ ). Most of the dental professionals were not familiar with referral to organisations like STIVORO and were concerned about resistance to such referral from their patients. The optimal protocol appeared to be too extensive to be viable for use in daily practice. The minimal advice protocol was found to be applicable to daily dental practice, perceived to provide structured guidance and reported to be easy to use.

In Table 1, the experienced barriers and facilitators reported during the feedback visits are summarised. Different barriers and facilitators were reported during the first versus second visits. During the first feedback visit (that is, interview), lack of time and anticipated resistance on the part of the patient were reported as barriers to protocol use by over 50% of the dental professionals. These impediments were found to be less important during the second feedback visit. Periodontal treatment and the presence of smoking-related diseases were mentioned most frequently as a starting point for informing patients about the importance of smoking cessation and thus protocol use during the second interviews. In addition, the lack of colleagues' involvement influenced the protocol use negatively, while using questionnaires to address general health problems stimulated protocol use.

Practices using the optimal protocol experienced the same barriers and facilitators as those using the minimal protocol, therefore their experiences are presented

**Table 1 Characteristics of the patients in the two monitoring samples**

	At 1 month	At 6 months
	$n = 1324$	$n = 1035$
<b>Demographics</b>		
Female (%)	54.0	56.0
Age (mean years) (SD)	44.2 (14.4)	43.9 (15.9)
Smoking patients (%)	31.8**	25.8
<b>Type of smoker (%)</b>		
Daily smoker	81.4	77.5
<b>Smoking cessation motivation (%)</b>		
Preparer	8.6*	11.8
Contemplator	18.6	18.3
Precontemplator	14.7**	32.1
No intention to quit	58.1*	37.8

\* $p \leq 0.05$ ; \*\* $p \leq 0.01$

and discussed together.

## DISCUSSION

Various barriers to the implementation of a protocol for the provision of smoking cessation advice and support during daily dental practice were found to occur. Table 2 gives an overview. In line with previous research,<sup>11–13</sup> lack of time and anticipated negative patient reactions were reported to be major barriers during the first interviews with the dental professionals in this study. However, the same barriers were reported less frequently during the second interviews six months later, which suggests that experience with the use of the advice protocol and the discussions conducted during the first feedback visit effectively diminished previously perceived barriers.

In line with the reported time barrier, most practices opted to use the minimal advice protocol. Given these perceived time constraints, it remains unclear whether a more extensive advice and support protocol would fit into daily dental practice or not. The same holds for the option of referral to a specialised smoking cessation service. This option went virtually unused in the present study but has been shown to be quite promising by Gordon and other researchers.<sup>14–16</sup>

Smoking-related oral health problems were reported to stimulate the provision of smoking cessation advice. More

education for dental professionals on the relation of smoking to oral health can presumably enhance the implementation of advice protocols in daily dental practice, as recommended by the Second European Workshop on Tobacco Use Prevention and Cessation for Oral Health Professionals.<sup>17</sup>

More troubling is the lack of involvement of colleagues reported during the second feedback visit. Former research has shown the support of colleagues to be a major stimulus for innovation<sup>18</sup> and that interaction and communication between the members of a team can be a key to change and improved care processes.<sup>19,20</sup> Implementation of smoking cessation protocol clearly requires a team effort. The provision of smoking cessation advice and support can therefore only be improved via encouragement of interaction and communication between the different members of a dental care team.

## Practical implications

The experience-based interviews revealed points to improve the implementation of smoking cessation advice and support in daily dental care. More education of dental professionals on the associations between smoking and oral health is clearly recommended. Training on motivational interviewing during the preparatory and continuing education of dental professionals may also enhance their confidence with regard to such and thus their ability

to raise the issue of smoking cessation during regular dental care contacts with patients who smoke. Motivational interviewing is a discussion technique in which treatment goals are reached by assessing and strengthening patients' motivation to change their behaviour.<sup>21</sup>

When dental professionals gain experience with a structured protocol for the delivery of smoking cessation advice and support, some frequently mentioned barriers will diminish. Stimulating the use of simple advice protocols thus constitutes a good strategy to raise the involvement of dental professionals in the primary and secondary prevention of tobacco addiction. Gaining experience with referral to specialised smoking cessation services needs further exploration.

*This research was financed by an independent grant from Pfizer.*

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**Table 2 Percentages of practices experiencing barriers/facilitators following the protocol for the provision of smoking cessation advice and/or counselling (n = 23)**

Item	– Barrier	First interview	Second interview
	+ Stimulus		
<b>Practice organisation</b>			
Using questionnaires to screen and assess general health problems	+	17.4	30.4
No involvement of colleagues	–	4.3	30.4
Lack of time	–	73.9	21.7
Practice and/or staff problems (for example, illness of staff)	–	39.1	13.0
Presence of a dental auxiliary or dental hygienist	+		8.7
Reimbursement for professionals	+	8.7	4.3
Part-time working	–	4.3	4.3
Using patient leaflets	+	4.3	4.3
<b>Professional characteristics and capacities</b>			
Difficult to start talking about smoking	–	4.3	34.8
Being a smoker	–	13.0	21.7
Lack of knowledge	–	8.7	4.3
Being an ex-smoker	+	13.0	4.3
<b>Relationship with patient</b>			
Fear of reaction of patients, resistance of patients	–	52.2	8.7
Repetition of advice at following appointment and referring to former advice	–	13.0	8.7
Discussing smoking during removal of calculus (during treatments focused on improving oral hygiene)	+	13.0	8.7
Afraid to influence confidence of patients in their dentist	–	8.7	4.3
<b>Patient factors</b>			
Advising patients with regard to smoking-related oral disorders	+	8.7	56.5
Periodontal treatment as impetus to inform patients	+	17.4	56.5
Advising refusers	–	8.7	8.7
Addiction	–		4.3
Not all patients want to visit a dental hygienist	–		4.3
Patients visit the dentist less (less time to increase confidence in relationship)	–		4.3

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