

Management of smoking patients by specialist periodontists and hygienists in the United Kingdom

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Abstract

Objective: To assess the management of patients who are current smokers in dental practice.

Materials and methods: A postal questionnaire to the 243 periodontists on the UK specialist register and 239 randomly selected hygienists on the General Dental Council register.

Results: Eighty per cent of both groups responded. There were significant demographic differences between the two groups of respondents: 88% of periodontists were in specialist practice and/or hospital or university departments, while 89% of hygienists were in general dental practice. Periodontists routinely asked their patients about smoking 99% of the time, hygienists 89%. More than 5 min. was spent advising a smoker patient by 35% of periodontists and 19% of hygienists. A proportion of both groups claimed to have had some recognized training in quit smoking (44% and 39%). When asked about the oral conditions of their smoking patients, 26% of periodontists stated that these patients did not have poorer oral hygiene, while 67% of hygienists thought that they did. While the majority of both groups discussed the oral effects of smoking, less than two-thirds discussed methods of giving up.

Conclusion: Both periodontists and hygienists are generally aware of the problems of treating smokers, and accordingly ask and advise their patients. However, lack of time and poor patient response may inhibit active involvement in assisting patients to quit smoking.

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Smoking causes more than 120,000 deaths in the United Kingdom each year and 650,000 in the European Union, through cancer, ischaemic heart disease, stroke and chronic lung disease (Johnson & Bain 2000, Peto et al. 2006). It is estimated that 6 million UK residents and 60 million people worldwide died from tobacco-related diseases

Conflict of interest and source of funding statement

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No external funding, apart from the support of the authors' institution, was available for this study. between 1950 and 2000 (Peto et al. 2006). There is also overwhelming evidence for the relationship between smoking and periodontal disease (Haber et al. 1993, Palmer et al. 2005).

Lader & Goddard (2004) reported that 70% of British smokers would like to quit smoking, and that at least 3 million smokers try to quit every year. In 1990, the United States Surgeon General stated that quitting smoking would reduce the risk of lung cancer by 50% after 10 years, and reduce the risk of having a heart attack to that of a non-smoker after 15 years (US Dept Health & Human Services 1990). A recent study on 34,439 British doctors indicated that, among men born around 1920, prolonged cigarette smoking from early adult life tripled age-specific mortality rates, but cessation at age 50 halved the risk and cessation at age 30 avoided almost all the risk (Peto et al. 2006).

The effects of quitting smoking on the periodontium have also been shown. Short-term changes are seen in the gingivae, indicating a change in vascularity (Nair et al. 2003), and benefits to treatment outcome in quitters have been demonstrated (Preshaw et al. 2005). Strategies such as the "5As" model (Ask, Assess, Advise, Assist, Arrange), as defined by the US 2000 Public Health Services Clinical Practice Guidelines, have been proposed for use in the dental setting (Christen 2001).

Recent reviews have concluded that brief intervention by physicians and nurses is effective (Lancaster & Stead 2004. Rice & Stead 2004), while intervention including nicotine replacement therapy (NRT) and other pharmacological agents such as bupropion have been shown to significantly increase success (Jackson et al. 1986, Mojica et al. 2004, Silagy et al. 2004). In contrast to general medical practitioners, dentists are potentially exposed to a greater proportion of the smoking population, who will often attend for several appointments over a set period of time. A recent study has shown that brief interventions by members of the dental team have benefits to a level similar to that achieved by physicians (Dyer & Robinson 2006) and recent reviews suggest that oral healthcare professionals could play an important role in providing advice on tobacco cessation (Carr & Ebbert 2006, Needleman et al. 2006). Although the success of such advice is modest, this is said to be a cost effective strategy (Ronckers et al. 2005).

However, smoking cessation interventions are not employed routinely in dental practice (Jones et al. 1993, Dolan et al. 1997, John et al. 1997, Watt et al. 2004). The main barriers appear to be lack of training (Johnson et al. 2006), time and funding (Chestnutt & Binnie 1995, Allard 2000, Watt et al. 2004) and doubt over the effectiveness of such intervention (Watt et al. 2004, Wyne et al. 2006).

The patient's perception of the role of the dentist in smoking cessation intervention seems to be more positive. A survey by Rikard-Bell et al. (2003) indicated that 73% of patients believed that dentists should get involved in smoking cessation practices, and 61% expected their dentists to discuss smoking with them. An earlier survey (Campbell et al. 1999) also reported 58.5% of patients considered it appropriate for their dentists to be involved in smoking cessation interventions. Conversely, 61.5% of their dentists considered that their patients would not accept such intervention. Similar responses by dentists have been reported subsequently (Watt et al. 2004).

We have previously investigated the role of dental hygienists in the promotion of smoking cessation (Gussy et al. 1996). In that study, 30% of hygienists reported they asked patients routinely if they smoked. Forty-eight per cent felt it was appropriate to give smoking cessation advice to their patients. The most commonly described barriers to counTable 1. Demographics: number and percentage of respondents, gender, smoker status and practice details

	Periodontist total $n = 243$		Hygienist total $n = 239$		p value*	
	n	%	n	%		
Respondents	194	80	192	80		
Valid responses [†]	185	76	177	74		
Gender						
Males	124	68	1	1	< 0.001	
Females	58	32	167	99		
Smoking status						
Never smoked	122	67.4	100	60.8	0.375	
Smokers	8	4.4	7	4.2		
Past smokers	51	28.2	58	35		
Work time						
Full	129	71	58	35	< 0.001	
Part	52	29	108	65		
Practice type						
Specialist practice	78	43	4	2	< 0.001	
Hospital/University	52	29	7	4		
Specialist+Hospital/University	25	14	0	0		
GDP	12	7	148	89		
Other	13	7	5	3		

*p values from χ^2 analysis of difference between periodontists and hygienists.

[†]Excluding questionnaires returned not completed or from non-practicing subjects.

selling were described as lack of time (64%), a negative response from patients (62%) and lack of training (59%). The majority stated they spent <5 min. giving advice to patients.

The aim of the present study was to investigate the attitudes, current practice and perceived barriers of specialist periodontists and dental hygienists regarding smoking cessation activities. The findings regarding hygienists were compared with the previous study (Gussy et al. 1996), to investigate changes in perceptions and behaviour of this group over the last 10 years.

Materials and Methods

A questionnaire survey was sent to all periodontists on the General Dental Council's Specialist Register living in England, Scotland, Wales and the Channels Islands. Hygienists living in the same areas were randomly selected from the Rolls of Auxiliaries such that similar sample sizes between the groups could be achieved. Data collection was by means of a self-administered postal questionnaire. The questionnaire was sent to each subject with a covering letter explaining the purpose of the survey and giving assurances that responses would be kept confidential together with a prepaid first-class stamped return envelope. The first wave of questionnaires was mailed in October 2005, and subsequent waves sent in November 2005 and January 2006 to non-responders.

The questionnaire utilized in this study was based on that used successfully in a previous study by Gussy et al. (1996). Sixteen questions were included on the questionnaire. Practitioners were asked about their age, gender, year of qualification, personal smoking status, whether they worked full or part time, and if they worked in general practice, hospital or NHS clinic, University or specialist periodontal practice. For the latter, multiple responses were permissible. The participants' knowledge of smoking and its effects were investigated by asking whether they felt that poor oral hygiene, more gingival bleeding, less attachment loss, more tooth loss, less motivation and more halitosis were more commonly seen in smokers. Participants were invited to give "ves". "no" or "don't know" responses.

Closed questions were asked regarding current practice related to smoking patients. These included whether patients were asked routinely if they smoked and how long was spent advising smokers. Participants were asked who in the practice was responsible for giving advice on smoking out of dentist, nurse, hygienist or other, and were permitted to give multiple responses. In addition, they were asked specifically

Table 2. Attitudes and practice of periodontists and hygienists regarding smoking cessation – number and percentage of respondents agreeing with statements

	Periodontist		Hygienist		p value*
	n/total [†]	%	n/total [†]	%	
Routinely ask patients if they smoke	183/185	99	153/172	89	< 0.001
Spend more than 5 min. advising smokers on smoking	63/181	35	33/171	19	0.007
Consider counselling					
Very appropriate	126/184	68	82/171	48	
Appropriate	35/184	19	70/171	41	< 0.001
Counselling given by					
Dentist	157/184	85	130/169	77	0.043
Hygienist	119/184	65	155/169	91	< 0.001
Nurse	27/184	15	9/169	5	0.007
Other	19/184	10	8/169	5	0.047

*p values from χ^2 analysis of difference between periodontists and hygienists.

[†]Number of positive responses/total valid responses.

whether oral and health effects and methods of giving up smoking were discussed, if pamphlets were given, whether quit smoking groups were suggested, and if NRT was offered or discussed. In addition, participants were asked to cite other methods of quitting they may suggest to their patients. Again, multiple answers were permitted for this question.

Participants were asked about the appropriateness of their giving smoking cessation advice. Perceived barriers to smoking cessation practices were gauged by asking if participants felt lack of time, funding, training or the patients' response would prevent them from helping patients to stop smoking. Finally, participants were asked whether or not they had received training in smoking cessation procedures; and in the event of a positive response, they were asked whether this was a brief intervention, intermediate or specialist course.

The data analysis was carried out using Stata 8 (Stata Co., College station, TX, USA). Continuous variables such as age and years since qualification were described using means and standard deviations. Qualitative variables were described as number of responses and percentages. Continuous variables were compared between groups using *t*-tests, analysis of variance or the Mann–Whitney *U* test as appropriate. Qualitative variables were tested using χ^2 analysis. Statistical significance was implied where p < 0.05 for each test.

Results

The response rate from both periodontists and hygienists was 80%. Of these, 185 (95%) and 177 (93%) respectively, were fully completed responses from practicing professionals.

Table 1 shows the profile of respondents with respect to gender, practice type and smoking status. Sixty-eight per cent of periodontists were male, while 99% of hygienists were female (p < 0.001). Sixty-seven per cent of the periodontists and 61% of the hygienists reported they had never smoked, while 28% and 35% respectively, reported a history of smoking, and 4% of each group were current smokers. Twice as many periodontists worked full time (71%) than hygienists (35%, p < 0.001). Fifty-seven per cent of periodontists worked in a specialist practice, but a proportion of these, 14%, also worked part time in a hospital or university. Twenty-nine per cent worked full time in hospital or university departments and only 7% worked within a general dental practice. Conversely, the majority of hygienists, 89%, worked in general practice, and a minority, only 2%, were employed in a specialist practice. Four per cent were employed by the hospital/ university, but none worked in a combination of specialist practice and hospital/ university.

Table 2 shows data regarding the attitudes and practice of the periodontists and hygienists regarding smoking cessation. Ninety-nine per cent of the periodontists reported that they routinely asked patients if they smoked, and 35% of these respondents spent more than 5 min. advising smoker patients on their habit. Eighty-nine per cent of hygienists routinely asked patients about their smoking habits, and 19% of this group spent more than 5 min. on counselling. Periodontists working in a general dental practice or solely in the hospital/university system were significantly less likely to spend over 5 min. counselling their smoker patients (19% and 22%, respectively) than those working in a specialist practice only (47%. p = 0.008). Similarly, only 15% hygienists working in general dental practice spent more than 5 min. counselling their smoker patients, while 53% of hygienists working in other than general dental practice spent more than 5 min. (p = 0.001). Sixty-eight per cent of periodontists felt that it was very appropriate to advise patients about their smoking habits. In contrast, only 48% of hygienists felt that counselling was very appropriate (p < 0.001). Eighty-five per cent of periodontists reported that the periodontist in the practice gave smoking cessation advice and 65% that the hygienist did. This was in contrast to hygienists, only 77% of whom reported that the dentist gave advice, while 91% stated that the hygienists more commonly gave advice. However, a gender difference was noted in the reporting of these activities among the periodontists, with 70% of male periodontists compared with only 50% female periodontists being more likely to report that hygienists had a role in giving smokers advice (p = 0.007).

The responses regarding barriers towards smoking cessation practises perceived by periodontists and hygienists are shown in Table 3. Both periodontists and hygienists cited patient response as the most important barrier. (47% and 60%, respectively). This data was also analysed with respect to number of years since qualification. In both groups, it was seen that the longer the dental health professional had been qualified, the less likely they were to feel patient response was a barrier (p = 0.021 for periodontists, p = 0.018for hygienists). Lack of time was the next most common response (29% and 58%, respectively). Only 18% of periodontists working solely in a specialist practice were likely to feel this was a barrier to providing cessation counselling compared with those in other forms of practice (39%, p = 0.049). Twentyone per cent of periodontists and 36% of hygienists felt that lack of training prevented them from giving quit smoking advice. Additionally, those hygienists who had been qualified longer were more likely to report lack of training was a barrier than those more recently qualified (p = 0.005). The percentage of periodontists and hygienists who felt lack of funding was a barrier to giving

Table 3. Perceived barriers of periodontists and hygienists towards smoking cessation advice practices – number and percentage of responses given agreeing with statement

	Periodontists		Hygien	p value*	
	n/183 [†]	%	n/170 [†]	%	
Lack of time	53	29	99	58	< 0.001
Lack of funding	29	16	30	18	0.671
Lack of training	39	21	61	36	0.002
Patient response	86	47	102	60	0.014
Other	29	16	14	8	0.015

**p* values from χ^2 analysis of difference between periodontists and hygienists. [†]Number of positive responses/total valid responses.

Table 4. Percentage and number of respondents agreeing to statements regarding oral hygiene, motivation and periodontal disease in smokers

Smoking patients have:	Periodontists		Hygienists		p value	
	n/total [†]	%	n/total [†]	%		
Poor OH	130/176	74	109/163	67	0.032	
More gingival bleeding	9/179	5	22/166	13	0.028	
Less attachment loss	12/175	7	37/167	22	< 0.001	
More tooth loss	135/172	78	121/166	73	0.435	
Less motivation	88/169	52	84/164	51	0.896	
More halitosis	146/176	83	141/166	85	0.397	

**p* values from χ^2 analysis of difference between periodontists and hygienists.

[†]Number of positive responses/total valid responses.

Table 5. Advice given by periodontists and hygienists to patients regarding smoking – percentage and number responding that a type of counselling or advice was given

	Periodontist		Hygienist		p value	
	n/181 [†]	%	n/167 [†]	%		
Discuss oral effects	179	99	164	98	0.674	
Discuss health effects	154	85	120	72	< 0.001	
Discuss methods of giving up	113	62	100	60	0.660	
Give pamphlets	87	48	71	43	0.333	
Advise quit smoking group	56	31	49	29	0.815	
Advise NRT	53	29	39	23	0.225	

*p values from χ^2 analysis of difference between periodontists and hygienists.

[†]Number of positive responses/total valid responses.

NRT, nicotine replacement therapy.

smoking cessation advice was low (16% and 18%, respectively).

Fifty-six per cent of periodontists reported having never received training in smoking cessation methods. Of the 44% that had, 29% had brief intervention counselling training, 8% had intermediate level and 7% had specialist level training. Sixty-one per cent of hygienists had not received training, 39% had, 26% having received brief intervention, 11% intermediate level and 2% specialist level.

The percentage of respondents agreeing to statements regarding oral hygiene, motivation and periodontal disease in smokers is shown in Table 4. Seventy-four per cent of periodontists and 67% of hygienists felt that their smoking patients had poor oral hygiene. Five per cent and 13%, respectively, reported that they believed smokers to have more gingival bleeding, and 7% and 22%, respectively, felt less attachment loss occurred. Seventy-eight per cent of periodontists and 73% of hygienists felt that smokers suffered from more tooth loss, and 83% and 85%, respectively, believed smokers to have more halitosis. Fifty-two per cent and 51% of periodontists and hygienists felt that smokers were less motivated regarding their oral health than nonsmokers. In comparing the group responses, beliefs regarding oral hygiene, gingival bleeding and attachment loss of smoker patients were different (p < 0.05).

Table 5 shows the advice given to patients by respondents regarding smoking. Ninety-nine per cent of periodontists and 98% of hygienists reported they discussed oral effects with their patients. Methods of giving up were discussed by 62% and 60%, pamphlets given by 48% and 43%, quit smoking groups recommended by 31% and 29% and nicotine replacement advised by 29% and 23% of periodontists and hygienists, respectively. Referral to the patients' general medical practitioner, hypnotherapists and smoking cessation counsellors were also stated as other methods of smoking cessation advice. Among periodontists, 41% of females referred patients to quit smoking groups compared with only 26% of males (p = 0.041). A similar situation was observed regarding recommendation of NRT: 40% of females reported this activity compared with only 24% of males (p = 0.035). Periodontists and hygienists who had received any form of training spent more time giving advice on quitting smoking (p < 0.05). In addition, these respondents were more likely to discuss methods of quitting, and to suggest quit smoking groups and NRT (p < 0.01).

Discussion

In the last 20 years there has been an emphasis in the United Kingdom on informing the general public of the effects of smoking on health and well being, and more recently a major drive to encourage smoking cessation. Patients can seek assistance with quitting smoking at their general medical practice, local pharmacy and various stop smoking services. Brief interventions by health-care professionals have been shown to have positive outcomes and to be cost effective, potentially helping thousands stop smoking. The dental profession is in an excellent position to provide a service, and there is some evidence that interventions in the dental setting are successful (Campbell et al. 1999). However, previous studies suggested that many dental health-care professionals were not providing advice and no previous study has been carried out to investigate the smoking cessation activities of periodontists in the United Kingdom. Quitting smoking should be considered as an essential

part of treatment planning for chronic periodontitis, thus periodontists and hygienists might be more likely to be involved in quit smoking activities.

A good response rate of 80% was obtained for both groups, and 76% of the periodontists and 74% of the hygienists returned valid responses. Personalized cover letters, the inclusion of firstclass stamped, addressed envelopes and repeated mailings were likely to have increased response rates. This is supported by findings from a systematic review on increasing response rates to postal questionnaires, in which the authors also concluded that short questionnaires and those originating from universities were more likely to be completed (Edwards et al. 2002).

There were demographic differences between the periodontists and hygienists that undoubtedly affected the responses. These included the fact that the majority (99%) of hygienists were female compared with only 32% of periodontists, and that most (89%) of the hygienists worked in a general practice in contrast to the minority of periodontists (7%). Thus, hygienists were more likely to encounter a much broader spectrum of patients in terms of disease and age and face different challenges in regard to time and funding. Only 4% of both groups were current smokers in the present study. In contrast, 7% of hygienists smoked in the previous study (Gussy et al. 1996), and in a study published by John et al. (2003), 8% of dentists were current smokers. This suggests that the number of smokers among dental health-care professionals may be on the decrease.

In the study by Johnson et al. (2006), it was reported that 64% of UK general dental practitioners nearly always asked their patients about their smoking habits, and this is higher than that previously reported by John et al. (2003), in which only 27% of GDPs in the Oxford (UK) region almost always discussed smoking with their patients. A study carried out by Dolan et al. (1997) in the United States revealed that 71% of periodontists, 25% of hygienists and 33% of general dental practitioners asked most or nearly all of their patients if they smoked. In the present study, 99% of periodontists routinely asked patients if they smoked. As smoking has an impact on the progression and treatment of periodontal disease, periodontists would be expected to be more likely to discuss this with patients. In

1996, Gussy et al. found that only 30% of hygienists asked their patients if they smoked, whereas 89% of respondents in the current study did so. Although this is a significant difference, comparison is compromised by the low response rate (51%) in the previous study. However, the indication that this activity is now almost universal in the dental health workers in the present study is encouraging.

In the present study, 35% of periodontists and 19% of hygienists reported spending more than 5 min. on counselling their smoker patients. The latter is a reduction on the 25% who reported spending this time on advising smokers 10 years ago (Gussy et al. 1996). Periodontists and hygienists working in a general practice spent much less time advising smokers on smoking. The system of remuneration in general practice in the United Kingdom may not encourage giving quit smoking advice, and a significant proportion of hygienists, the majority working in general practice, reported lack of time as a barrier to giving smoking cessation advice. The study by John et al. (1997) found that dentists in a private practice were significantly more likely to discuss smoking with smoker patients than those in the National Health Service or mixed practice. The authors did not suggest this was due to time restrictions, but stated that the subject of smoking may be raised more easily in the private practice environment.

The majority of studies carried out have shown that dental health-care workers believe that it is appropriate, or the dentists' duty to become involved in smoking cessation activities (Allard 2000, John et al. 2003, Wyne et al. 2006). The majority of both groups in the present study reported that they felt counselling was appropriate or very appropriate.

It has been suggested that the dentist may be able to take a lead role in assessing the smoking habits of patients and making the patient aware, and that hygienists and nurses may be able to give more detailed advice and assistance to the patient (Watt et al. 2000). The results of the present study indicated that dentists and hygienists were most likely to advise patients, but dental nurses and other members of the team may be involved. Periodontists reported that they themselves were more likely to take on this role, but the hygienists reported a higher number of hygienists giving smoking cessation advice. As the hygienists were predominantly employed in general dental practice, they may be more likely to be involved in prevention than the general dental practitioners they were employed by. Interestingly, a greater number of male periodontists than female periodontists reported that hygienists had a role in giving smokers advice.

Barriers to giving smoking cessation advice are apparent in both the medical and dental professions. Past studies have reported that the most common barriers seem to be lack of time, lack of training, financial constraints and the risk of alienating patients (Chestnutt & Binnie 1995, Clover et al. 1999, Albert et al. 2002, Watt et al. 2004). In the present study, an unfavourable patient response was the most common barrier reported. Periodontists and hygienists who had been qualified for longer were less likely to consider this a barrier. In contrast, some studies have shown that patients expect to receive tobacco interventions from their dentist, regardless of whether they consider them effective (Campbell et al. 1999, Rikard-Bell et al. 2003). This infers that dental health-care workers' fears of losing or alienating patients may be unfounded. Hygienists were more likely to feel time was a barrier than periodontists and the proportion reporting this barrier is very similar to our previous study. Other studies that have surveyed general dental practitioners indicate that lack of time often seems to be the most important barrier (Chestnutt & Binnie 1995, Johnson et al. 2006). The number of dental health workers who felt lack of funding was a barrier in the present study was relatively low.

Lack of training was cited as the third most important barrier to giving smoking cessation advice, but hygienists reported this significantly more than periodontists. This is in agreement with Dolan et al. (1997) where only 17% of hygienists felt well prepared to help patients who smoke compared with 28% of periodontists. However, the proportion of hygienists in the current study who considered lack of training a barrier was less than that in our previous study (Gussy et al. 1996). The proportion fell from 64% to 36%. Additionally, those who had been qualified more recently considered it to be less of a barrier. Smoking cessation training has been incorporated into the dental hygiene curriculum in recent years, which is likely to have made an impact.

In 2006, the Commonwealth Dental Association produced a consensus on tobacco cessation. They agreed that training in tobacco control should be provided to dental undergraduates to enable them to inform patients of the risks of tobacco use and support their patients in quitting smoking (www. cdauk.com, 2006). Removing the barriers to providing smoking cessation advice can be difficult. Lack of funding may result in less time spent advising patients. Lack of training and knowledge of resources may result in lack of confidence in the health-care worker. A review by the Cochrane Collaboration (Lancaster et al. 2000) on the training of health professionals in smoking cessation concluded that health-care professionals who were trained were better at delivering smoking cessation interventions, although they also highlighted that successful outcomes may be modest. A study carried out by Gould et al. (1998) on the impact of National Cancer Institute training on clinical tobacco use cessation found that dentists were more likely to implement some cessation services in their practice following training. In the present study, 44% of periodontists and 39% of hygienists had received recognized training in smoking cessation activities. This is higher than the proportion reported by Dolan et al. (1997) where 21% of periodontists and 23% of hygienists had been trained. The majority of dental health-care workers who had received training in the present study had undergone only brief intervention training. However, those respondents who had received training were much more likely to discuss smoking cessation with their patients.

The current practices of periodontists and hygienists related to smoking cessation activities were investigated by asking respondents what type of advice they gave their patients. The majority in both groups discussed the oral effects of smoking, but the hygienists were less likely to discuss general health effects. This may be because they feel less well equipped to discuss general health issues with patients. Dentists in the United Kingdom cannot prescribe NRT or bupropion through National Health Service funding, but can advise their patients on over the counter products available. Many studies have shown that the addition of pharmacological components to a quit smoking strategy will increase its effectiveness (Silagy et al.

1994, Fiore et al. 2000). If dental healthcare workers are unable to prescribe these products, they should be able to identify the correct referral pathways for their patients. Only a third or less of respondents in both groups advised patients to attend quit smoking groups or the use of NRT, but respondents who had training were more likely to suggest the various individual methods of quitting. Female periodontists were more likely to refer patients for group counselling or advise NRT therapy than males. A critical review of the literature by Roter & Hall (2004) revealed that female physicians spent on average 2 min. more talking to their patients in general consultations than males and were more likely to engage in psychosocial and emotionally focussed conversation

The percentage of hygienists engaging in smoking cessation activities in the present study is much higher than in the study by Gussy et al. (1996). The number of periodontists involved in these activities is lower than that of general dental practitioners surveyed by Johnson et al. (2006) in 2002, but higher than respondents in the study by Watt et al. (2004).

Periodontists and hygienists appear to be engaged with the first three components of the 5As smoking cessation model: Ask, Assess and Advise. The final stages of the 5As model are Assist and Arrange. At present, although not directly questioned as to these components, it would appear that UK dental health-care professionals are less likely to proceed to these stages. Although the present results are encouraging, it is clear that more hygienists and periodontists could be undertaking these activities.

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Clinical Relevance

Scientific rationale for the study: Smoking cessation is an important component of periodontal therapy but little is known about how this is put into practice by clinicians in periodontology. & Suvan, J. (2006) Evaluation of tobacco use cessation counselling in the dental office. *Oral Health and Preventive Dentistry* **4**, 27.

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Principal findings: A high proportion of periodontists and hygienists in the United Kingdom enquire about smoking habits but disappointingly few clinicians spend time helping patients to quit. apy for smoking cessation. *Cochrane database of Systematic Reviews*, Issue 3. Art. No; CD000146. DOI: 10.1002/14561858. CD000146.pub2.

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Practical implications: It is necessary to identify ways in which smoking cessation programmes can be adopted and utilized in periodontal practice.

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