

# Smoking Cessation Services Provided by Dental Professionals in a Rural Ontario Health Unit

• Douglas J. Brothwell, DMD, MSc •  
• Karen A. Armstrong, MA, DPH •

## A b s t r a c t

**Purpose:** This study was undertaken to determine what smoking cessation services dental professionals in Ontario's Wellington-Dufferin-Guelph Health Unit (WDGHU) provide before disseminating a smoking cessation information package.

**Methods:** Data were collected with 540 self-administered questionnaires mailed to 60 local dental offices. Replies were requested from all dentists, dental hygienists, dental assistants and other dental staff working in each dental office.

**Results:** Completed responses were obtained from 126 dental personnel in 28 (47%) of the 60 dental offices surveyed. The proportion of dental offices, dentists and hygienists providing cessation services to most patients was as follows: asking patients about tobacco-use status, 46%, 31% and 32%; advising tobacco users to quit, 46%, 32% and 29%; assessing tobacco users' interest in quitting, 46%, 25% and 19%; and assisting interested patients to quit, 25%, 6% and 13%, respectively.

**Conclusion:** This survey indicates that most dental professionals in the WDGHU do not provide proven smoking cessation services. An opportunity exists to increase the proportion of dental professionals providing proven smoking cessation interventions as part of routine patient services.

**MeSH Key Words:** attitude of health personnel; dentist-patient relations; patient education; smoking cessation

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Oral health professionals have legitimate professional reasons to help patients stop using tobacco. Tobacco use has been labelled the number one cause of preventable disease and premature death in Ontario.<sup>1</sup> The cause-and-effect relationship between smoking and oral disease is well documented in the scientific literature.<sup>2</sup> Smoking and smokeless tobacco use cause or are associated with these oral conditions: oral cancer;<sup>3-5</sup> periodontitis;<sup>6-9</sup> impaired response to periodontal therapy;<sup>10-12</sup> implant failure;<sup>13</sup> tooth loss;<sup>14-16</sup> dental caries;<sup>17-19</sup> delayed wound healing, chronic candidiasis, staining and halitosis;<sup>20</sup> and premalignant tissue change.<sup>21,22</sup>

Public health units in Ontario are mandated to deal with tobacco use. One potential strategy is to increase the number of health professionals who provide health education about the benefits and methods of quitting smoking to patients. As one component of this strategy, dental professionals can play an important role in reducing the damaging effects of tobacco use and thus help meet provincial health objectives.

The effectiveness of smoking cessation services provided by dental professionals is well established. At least 10 studies<sup>23-32</sup> have concluded that the dental office is an appropriate and effective location for the message about stopping tobacco use. The practice of offices that offer tobacco-use cessation services is consistent with current evidence and practice guidelines.<sup>33</sup>

Despite this proven potential, dental professionals are reluctant to provide tobacco-use cessation services for their patients.<sup>34</sup> Research has identified many perceived barriers to professional involvement. Agencies have dealt with some of these barriers with the development of educational materials. Most are based on the proven "ask, advise, assist and arrange" approach developed by the U.S. Department of Health and Human Services.<sup>33</sup> Dental offices using this program can expect a rate of patients quitting smoking that is 2 to 3 times higher than that produced by offices with no program.<sup>23-30,33</sup> When viewed from a population health perspective, the institutionalization of smoking cessation

services in the dental profession would greatly benefit the health of Canadian smokers.

The purpose of this study was to assess the extent to which oral health professionals provide smoking cessation interventions in the Wellington-Dufferin-Guelph Health Unit (WDGHU), a rural health unit in Ontario, before distributing a locally developed tobacco-use cessation program. Two types of dental practices were targeted in the study: general practices, because they provide most oral health services; and periodontal practices, because the impact of smoking on periodontal tissues is proven and these offices provide frequent recall contact.

## Methods

### Sample

The offices of all dentists listed in a local dental program database (fall 1997) were considered for the survey. This list was limited to general dentists and periodontists with addresses within the health unit catchment area. A hand search of the Royal College of Dental Surgeons of Ontario's listing of dentists and specialists in Ontario identified additional general and periodontal dental offices within the health unit. A separate sample frame was not sought for dental hygienists because no known independent hygiene practices exist within the health unit. The total sampling frame consisted of 60 dental offices; a total of 540 surveys were sent to general dentists, periodontists, dental hygienists, dental assistants, and receptionists or office managers in those offices.

### Questionnaire

A self-administered questionnaire collected data about the smoking cessation activities and demographic characteristics of the dental personnel surveyed. Cessation questions assessed dental professional involvement in all the specific activities recommended in a locally developed tobacco cessation booklet. Demographic questions assessed the age, sex, occupation and tobacco use of each dental professional.

A 5-point Likert scale (possible responses: routinely, mostly, sometimes, seldom and never) was used to assess the following areas of intervention by each dental professional: asking patients about their tobacco-use status, advising tobacco users to quit, assessing tobacco users' interest in quitting and helping interested patients to quit. Dental professionals were also asked about the presence of an office follow-up system for patients attempting to quit using tobacco. Respondents reporting the presence of an office follow-up system were asked if the follow-up included any of the following: a letter, separate office visit, postcard, telephone call or any other form of follow-up.

A pilot questionnaire was pretested on 21 dental personnel: 4 dentists, 5 dental hygienists, 7 dental assistants and 5 receptionists or office managers. Minor changes resulted

from the feedback obtained. These participants were all subsequently sent updated questionnaires to complete. The results obtained from the pilot questionnaires were not included in the data set.

### Data Collection

Questionnaires, a letter of introduction and an addressed, stamped return envelope were mailed to each dental office in the fall of 1997. Each of the 60 identified offices was sent 6 questionnaires per dentist ( $n = 90$ ). The 6 questionnaires were to be completed by the dentist, 1 dental hygienist, 2 dental assistants, 1 receptionist and 1 additional staff member.

One week later all offices with a listed facsimile number were reminded by facsimile to complete the questionnaire. Nonresponding offices received a personalized telephone call 3 weeks later requesting the completion and return of the survey. Offices requesting more copies of the survey were given an additional 6 copies for each dentist.

### Analysis

Epi Info 5.0 was used to enter the data and the SPSSPC+ statistical program to analyze the data. Frequency distributions and cross tabs were used to summarize and look for trends in the data.

## Results

### Respondents

**Response Rate** — Of the 540 surveys sent to 90 dentists and their staff, 126 responses were received. Responses were received from 32 dentists (36%), 31 dental hygienists, 37 dental assistants and 26 receptionists or office managers from 28 (47%) of the 60 dental offices surveyed. The proportion of responses from hygienists, assistants, or receptionist/office managers was not determined as there was no sampling frame available or sought for these 3 personnel groups.

**Tobacco-Use Status** — Receptionists or office managers were more likely to report being a current smoker ( $n = 4$ , or 16%) than were dental assistants ( $n = 4$ , or 11%), hygienists ( $n = 3$ , or 10%) or dentists ( $n = 1$ , or 3%). These differences were not statistically significant because of the low numbers in each category (12 smokers in total).

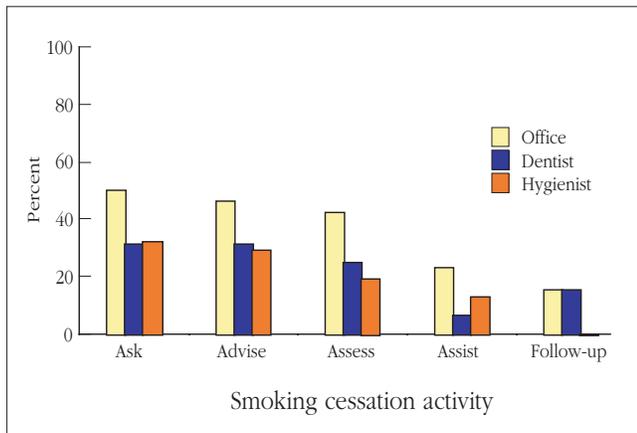
### Smoking Cessation Activities

The smoking cessation services provided by office, dentist and hygienist are summarized in **Table 1**. Results dichotomized according to whether the activity was provided most of the time (60% or more) are shown in **Fig. 1**. The proportion of dentists and hygienists providing different types of assistance is shown in **Fig. 2**.

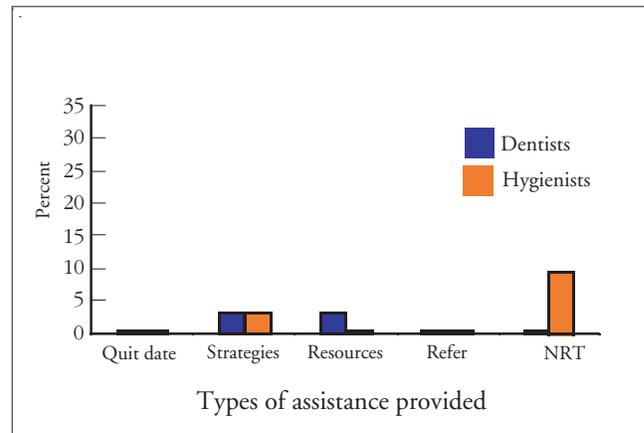
**Dental Assistants and Receptionists or Office Managers** — The results for the dental assistant and reception or office manager groups are reported together because of their low

**Table 1 Summary of smoking cessation activities**

Activity	Frequency	Office		Dentist		Hygienist	
		No. (n = 28)	%	No. (n = 32)	%	No. (n = 31)	%
Ask patients about their tobacco-use status	Routinely	9	32	7	22	5	16
	Mostly	4	14	3	9	5	16
	Sometimes	7	25	8	25	7	23
	Seldom	7	25	11	34	9	29
	Never	1	4	3	9	5	16
Advise smokers of the health risk and need to quit	Routinely	9	32	6	19	4	13
	Mostly	4	14	4	13	5	16
	Sometimes	7	25	7	22	7	23
	Seldom	6	21	11	34	7	23
	Never	2	7	4	13	8	26
Assess if patients are interested in quitting	Routinely	6	21	5	16	1	3
	Mostly	7	25	3	9	5	16
	Sometimes	6	21	4	13	8	26
	Seldom	4	14	12	38	4	13
	Never	5	18	8	25	13	42
Assist interested patients to quit	Routinely	1	4	0	0	1	3
	Mostly	6	21	2	6	3	10
	Sometimes	7	25	7	22	7	23
	Seldom	7	25	10	31	5	16
	Never	7	25	13	41	15	49
Follow up with interested patients	Yes	5	18	4	13	0	0
	No	23	82	28	88	31	100



**Figure 1:** Percentage of smoking cessation activities provided most of the time (> 60%) by dental offices, dentists and hygienists for most patients.



**Figure 2:** Assistance provided by dentists and hygienists most of the time (> 60%) to patients interested in quitting smoking. NRT = Nicotine replacement therapy.

levels of involvement in smoking cessation services. Only 7 of the 63 respondents (11%) indicated activity with most patients in any of the main intervention areas (ask, advise, assess, assist or follow-up). No respondents reported indicating the patient's smoking status on the patient's chart, despite frequent recommendations that receptionists be responsible for this activity.

**Hygienist and Dentist** — Dentists and hygienists generally reported similar levels of smoking cessation interventions (Fig. 1). Patient services provided in the main intervention areas included the following:

- Ask and advise: Only about 1 in 3 dentists and hygienists reported determining patients' smoking status or advising patients about the effect of smoking on health and the need to quit for most of their patients. Questions about smoking included in the patient's medical history and looking for oral signs of smoking were the most common methods of determining a patient's smoking status.
- Assess and assist: Asking smokers whether they are interested in quitting smoking and aiding those who want to quit were not common services provided by dentists or

hygienists. Fewer than 10% of dentists and hygienists provided any methods of assistance for most patients interested in quitting smoking (Fig. 2).

- Follow-up: This was a rare patient service. The only form of follow-up reported was continued discussion at the next recall appointment. No respondents reported following up a patient's attempts to quit smoking with a letter, postcard or telephone call.

**Office** — Results were also analyzed by dental office because it is not necessary to have more than one dental professional providing smoking cessation services in the same dental office and the delegation of these duties is often advised. Although almost 50% of dental offices provided ask, advise and assess services for most patients, less than 25% of offices provided assist or follow-up services (Fig. 1).

## Discussion

Knowing the current smoking cessation services provided by dental professionals provides a baseline for assessing the effect of a new tobacco-use cessation information package. Consistent with the findings of other studies,<sup>35,36</sup> this survey found that most dental professionals in the WDGHU did not provide smoking cessation interventions as part of their routine patient services.

Because of the relatively low response rate by area dentists (36%) and the self-reported method of data collection, the responding population may not be representative of the general population. No attempt was made to assess the cessation services or demographics of the nonrespondents. Because of response bias, this survey may under-represent current smokers among dental personnel. However, the smoking rates and cessation services reported by the various dental personnel in the study were consistent with the findings reported in other studies,<sup>35,36</sup> suggesting that these data may be compared with those from other studies.

The pattern of professional smoking cessation activities shown by this survey suggests that most dental professionals in the WDGHU are not providing proven smoking cessation services for most of their patients who smoke. The abilities and available time of assistants and receptionists or managers were not being effectively used for smoking cessation services. While dentists and dental hygienists provided most of the reported smoking cessation services, one-third or less said that they routinely ask patients about their use of tobacco, advise them about the need to quit smoking, or assess patients' readiness to quit. Less than 15% of dentists and hygienists said they assist patients who want to quit smoking or provide follow-up for those who are quitting.

## Conclusion

Smoking undoubtedly affects the health of the mouth; it is both a dental and a medical problem. Oral health professionals can effectively help interested smokers to quit.

Dentists and hygienists can, therefore, reduce the burden of smoking-related illness by helping patients to quit using tobacco. The challenge for the public health sector is to increase the proportion of dental professionals who provide proven smoking cessation services for their patients. The intervention levels in dental offices within the catchment area of the WDGHU suggest an opportunity to increase the involvement of local dental professionals. ♦



*Dr. Brothwell is head, community dentistry, faculty of dentistry, University of Manitoba, Winnipeg, Manitoba.*



*Ms. Armstrong is tobacco prevention coordinator, Wellington-Dufferin-Guelph Health Unit, Guelph, Ontario.*

**Correspondence to:** Dr. Douglas J. Brothwell, Community Dentistry, Faculty of Dentistry, University of Manitoba, 780 Bannatyne Ave., Winnipeg, Manitoba R3E 0W2. E-mail: brothwel@ms.umaniota.ca.

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