

Dentists' Perceptions of Providing Care in Long-Term Care Facilities

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ABSTRACT

Aims: To compare the perceptions of dentists in British Columbia regarding their decisions to provide treatment in long-term care facilities and to explore changes since 1985 in Vancouver dentists' attitudes to treating elderly patients in such facilities.

Materials and Methods: Dentists were randomly selected from all of British Columbia in 2008 and surveyed with a similar questionnaire to that used for a 1985 study of Vancouver dentists. The attitudes of current dentists, the patterns of their perceptions and trends over time were analyzed.

Results: Of the 800 BC dentists approached for the survey in 2008, 251 replied (31% response rate). Only 37 (15%) of respondents were providing treatment in long-term care facilities, and another 48 (19%) had stopped providing services in this setting. Among those providing care, important considerations were continuing education in geriatrics, the presence of a dental team and fee-for-service payment. The most common reasons for deciding to provide services in long-term care facilities were to increase the number of patients being served and to broaden clinical practice. Dentists who had stopped treating patients in long-term care facilities reported their perception that treating elderly people is financially unrewarding and professionally unsatisfying. The perceptions of dentists shifted substantially from 1985 to 2008. In particular, dentists responding to the 2008 survey who had never provided services in long-term care facilities were more likely to perceive administrative difficulties and a lack of financial reward as barriers than those surveyed in 1985. In addition, the proportion of Vancouver dentists with advanced education in geriatrics declined over the period between the 2 studies (75 [22%] of 334 in 1985, 10 [11%] of 87 in 2008).

Conclusion: Dentists who did not provide care for residents of long-term care facilities in 2008 seemed more likely to be deterred by administrative difficulties and financial costs than those not providing such care in 1985. In addition, fewer dentists had appropriate training in geriatrics. Continuing education, working with a dental team and payment on a fee-for-service basis were important factors for dentists who were providing care in such facilities.

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The number of senior citizens in Canada is projected to increase from 4.2 million to 9.8 million between 2005 and 2036.¹ Concurrently, the rate of edentulism is decreasing, which has resulted in a high pro-

portion of elderly patients requiring dental treatment.²⁻⁴

In the 2009 Canadian Community Health Survey—Healthy Aging, a substantial proportion (58.3%) of elderly people (≥ 65 years)

living independently reported good oral health.³ However, elderly people currently residing in long-term care facilities are significantly older and frailer and are in greater need of dental care than in the past.^{5,6} Poor oral health adversely affects nutrition and leads to diminished social interaction.^{7,8}

In North America, the lack of services available to elderly people living in institutions remains a concern.^{9,10} More specifically, lack of administrative and financial support, time constraints, difficulty in providing care and lack of training were identified as barriers to providing dental care in long-term care facilities.¹¹⁻¹³

It has been more than 25 years since the perceptions of British Columbia dentists about the provision of care were studied. Given the aging population and the greater proportion of older people who retain their dentition, it was important to examine the attitudes and perceptions of current dentists. The aims of this survey study were to identify perceptions related to BC dentists' decisions to treat, not to treat or to stop treating patients in long-term care facilities and to explore changes in perceptions about treating elderly patients in long-term care facilities in Vancouver since 1985.

Materials and Methods

The questionnaire created by MacEntee and colleagues¹¹ for a 1985 survey of Vancouver dentists was used as the basis for the current study, with some additional questions to examine why current dentists had decided to treat, had stopped treating or had never treated patients in long-term care facilities. The questionnaire was pretested by a few volunteers before being administered to the study population. The final questionnaire comprised 2 sections: the first sought personal information, including sex, years in practice and postgraduate training, and the second inquired about attitudes related to providing care to frail elderly patients. All responses were based on a Likert scale (Table 1).

The British Columbia Dental Association mailed the questionnaire in 2008 to 800 general dentists, selected at random according to a computer-generated random number list, who were asked to return the completed survey by fax within 1 week. At 3 and 5 weeks after the initial mailing, reminders were sent to those who had not yet responded.

SPSS version 17.0 was used for univariate, bivariate and multivariate analyses. Common patterns of attitudes within each group of dentists

Table 1 Scales used to measure dentists' perceptions and viewpoints

Perceptions and viewpoints
How important are the following factors in your decision to treat patients in long-term care?^a
Amount of private practice time
Amount of personal time
Distance to facility
Remuneration
Availability of dental operatory and equipment at facility
Personal satisfaction in working with elderly people
Experience and training in treating elderly people
What are your perceptions about treating elderly patients?^b
Treating elderly patients is a pleasant experience
A patient's age does not influence my decision to provide services
Elderly patients rarely follow recommended treatment
It is hard to improve the oral health of elderly patients
Elderly patients present difficulties because of medical problems or dementia
Treating elderly patients is time-consuming
Treating elderly patients is financially unrewarding
Why did you decide to provide dental services in long-term care facilities?^b
Opportunity to increase my practice
Social contacts with elderly patients are rewarding
I want to perform a public service
Part of professional responsibilities
Part-time practice opportunities
Part of semi-retirement practice
Broadens the scope of my practice
I was asked to work in a long-term care facility
A past patient or family member was in a long-term care facility
Please respond to the following statements^b
Dental hygienists are important members of the clinical team in long-term care facilities.
Certified dental assistants are important members of the clinical team in long-term care facilities.
Continuing education beyond dental school would be helpful to treat patients in long-term care.
Additional paperwork such as consent for treatment is a concern.

^aLikert scale for responses: 1 = very important, 2 = moderately important, 3 = neutral, 4 = minimally important, 5 = not important.

^bLikert scale for responses: 1 = strongly agree, 2 = agree, 3 = slightly agree, 4 = neutral, 5 = slightly disagree, 6 = disagree, 7 = strongly disagree.

Table 2 Bivariate comparisons of demographic and personal factors and payment preferences among dentists surveyed in British Columbia in 2008

Factor	Dentist group; ^a no. (%) of respondents or mean ± SD			Statistical test result
	Currently treating in LTC	Stopped treating in LTC	Has never treated in LTC	
Sex	(n = 35)	(n = 47)	(n = 161)	
Males	33 (94)	41 (87)	123 (76)	$\chi^2 = 7.4$ (df = 2) $p = 0.024$
Females	2 (6)	6 (13)	38 (24)	
Urbanization^b				
Urban (n = 206)	25 (12)	38 (18)	143 (69)	$\chi^2 = 6.1$ (df = 2) $p = 0.048$
Rural (n = 27)	5 (19)	8 (30)	14 (52)	
Location of practice	(n = 36)	(n = 46)	(n = 165)	
Vancouver	8 (22)	9 (20)	70 (42)	$\chi^2 = 10.9$ (df = 3) $p = 0.004$
Outside Vancouver	28 (78)	37 (80)	95 (58)	
Advanced training in geriatrics	(n = 35)	(n = 47)	(n = 158)	
No	30 (86)	40 (85)	145 (92)	$\chi^2 = 1.7$ (df = 2) $p = 0.43$
Yes	5 (14)	7 (15)	13 (8)	
Preferred method of payment^c	(n = 36)	(n = 48)	(n = 158)	
Fee for time	9 (25)	23 (48)	77 (49)	$\chi^2 = 17.1$ (df = 2) $p = 0.002$
Fee for service	24 (67)	23 (48)	76 (48)	
Sessional or retainer fee	3 (8)	2 (4)	11 (7)	
Age and practice data	(n = 35)	(n = 47)	(n = 158)	
Age (years)	53.8 ± 8.0	51.0 ± 9.0	47.0 ± 9.0	ANOVA ^{d,e}
Years of practice	26.3 ± 10.9	24.5 ± 9.7	20.3 ± 9.9	ANOVA ^d $p = 0.002$
Hours per week	35.1 ± 8.0	33.6 ± 5.2	33.4 ± 5.7	ANOVA ^d $p = 0.40$
% of patients ≥ 65 years	21.4 ± 10.1	20.8 ± 12.9	18.4 ± 10.7	ANOVA ^d $p = 0.22$

LTC = long-term care, SD = standard deviation.

^aOf the total number of 251 respondents, 37 were treating elderly patients in long-term care facilities, 48 had stopped treating such patients, and 166 had never treated patients in this setting. The n values provided for each characteristic reflect the number of respondents in each group who provided information for that characteristic.

^bThe percentages for urbanization were calculated in terms of the total number of urban dentists (n = 206) and rural dentists (n = 27).

^cMultiple responses allowed.

^dWith Bonferroni post hoc adjustment.

^ePairwise comparisons: for currently vs. never, $p = 0.001$; for currently vs. stopped, $p = 0.57$; for never vs. stopped, $p = 0.034$.

and among groups of dentists were studied with exploratory factor analysis. This analysis is particularly useful for comparing the relative importance of a specific perception (e.g., “treating elderly patients is time-consuming”) within a complex pattern of perceptions (e.g., “decision to treat or not to treat elderly patients”). The importance of each perception within a complex pattern is defined by the magnitude of a loading value given to the specific

perception. Loadings of the most important factors are close to 1.0, whereas loadings of perceptions that are of little or no importance are close to 0.0.

The study was approved by the Clinical Research Ethics Board of the University of British Columbia.

Results

A total of 251 questionnaires (31%) were returned in the current study, conducted in 2008. Of the 233

Table 3 Bivariate comparisons of dentists' perceptions

Perception	Dentist group; mean ± SD ^a			p value for ANOVA ^c
	Currently treating in LTC (n = 35) ^b	Stopped treating in LTC (n = 47) ^b	Has never treated in LTC (n = 152) ^b	
Treating elderly patients is a pleasant experience	2.8 ± 1.3	3.0 ± 1.5	2.8 ± 1.3	0.64
A patient's age does not influence my decision to provide services	2.5 ± 1.8	2.7 ± 1.6	2.5 ± 1.6	0.78
Elderly patients rarely follow recommended treatment	3.7 ± 1.3	4.1 ± 1.5	4.1 ± 1.5	0.24
It is hard to improve the oral health of elderly patients	2.5 ± 1.5	2.1 ± 1.1	3.7 ± 1.6	< 0.001
Elderly patients present difficulties because of medical problems or dementia	2.1 ± 1.2	3.2 ± 1.7	2.8 ± 1.1	< 0.001
Treating elderly patients is time-consuming	2.3 ± 1.0	2.5 ± 1.5	2.9 ± 1.3	0.013
Treating elderly patients is financially unrewarding	3.2 ± 1.6	3.2 ± 1.5	3.8 ± 1.3	0.017

ANOVA = analysis of variance, SD = standard deviation.

^aMeans and standard deviations derived from the following Likert scale: 1 = strongly agree, 2 = agree, 3 = slightly agree, 4 = neutral, 5 = slightly disagree, 6 = disagree, 7 = strongly disagree.

^bIn each group, responses were missing for one or more survey respondents, as indicated by sample sizes.

^cWith Bonferroni post hoc adjustment.

respondents, 206 (88%) were from urban areas and 27 (12%) were from rural areas. Analysis of known information about those who did not respond showed no statistically significant differences between responders and nonresponders with respect to sex, years of practice, urban vs. rural setting or location of practice.

A reliability analysis showed no statistically significant differences between answers to similarly worded questions about different aspects of care provision, which indicated an acceptable level of reliability.

For further analysis, the respondents were categorized into 3 groups: dentists who were currently treating patients in long-term care facilities (n = 37), dentists who had stopped treating patients in long-term care facilities (n = 48) and dentists who had never treated patients in long-term care facilities (n = 166).

Personal Characteristics and Attitudes of Current Dentists

The 3 groups of dentists differed significantly in terms of sex ratio (p = 0.024), location of practice (within or outside Vancouver) (p = 0.004) and preferred method of payment (p = 0.002) (Table 2). The majority of dentists who were treating elderly patients in long-term care institutions were men, and dentists providing this type of care were slightly older than dentists not treating patients

in this setting. On average, dentists in all 3 groups had over 20 years of clinical experience. Dentists currently treating patients in long-term care facilities and those who had stopped treating these patients had more years of dental practice than dentists who had never treated elderly patients in long-term care facilities (p = 0.002).

A small percentage of dentists in all 3 groups had training in geriatric dentistry. Within all 3 groups, about 20% of the dentist's patient pool consisted of patients 65 years of age or older.

In all 3 groups, a minority of respondents preferred sessional (retainer) fees as payment for services provided in long-term care facilities (Table 2). Substantially more dentists who were currently treating elderly patients in long-term care facilities (67%) than those who had never treated (48%) or who had stopped treating (48%) this patient group preferred fee-for-service payment. Proportions for fee-for-time and fee-for-service preferences were similar for dentists who had stopped providing services in long-term care facilities (48% and 48%, respectively) and for those who had never provided these services (49% and 48%, respectively).

Respondents tended to agree that a patient's age did not influence their decision to provide services, that treating elderly people in long-term care facilities was a pleasant

Table 4 Multivariate comparisons of dentists’ perceptions related to treating elderly patients

Perception ^a	Dentist group; loading value ^b		
	Currently treating in LTC	Stopped treating in LTC	Has never treated in LTC
Treating elderly patients is a pleasant experience	0.516	-0.424	-0.673
A patient’s age does not influence my decisions to provide services	0.162	0.109	0.544
Elderly patients rarely follow recommended treatment	0.828	0.570	0.589
It is hard to improve the oral health of elderly patients	0.530	0.672	0.622
Elderly patients present difficulties because of medical problems or dementia	0.682	0.686	0.601
Treating elderly patients is time-consuming	0.681	0.606	0.617
Treating elderly patients is financially unrewarding	0.706	0.835	0.704

LTC = long-term care.

^aDentists rated their perceptions with the following Likert scale: 1 = strongly agree, 2 = agree, 3 = slightly agree, 4 = neutral, 5 = slightly disagree, 6 = disagree, 7 = strongly disagree.

^bLoading values (ranging from a minimum of 0 to a maximum of 1.0) were determined by the extraction method of exploratory factor analysis. A higher loading of perception indicates higher self-perceived importance of this perception relative to other, less important perceptions.

experience and that it is hard to improve the oral health of these patients (Table 3). They had a more neutral response to the statement that elderly patients rarely follow recommended treatment (Table 3). Dentists in all 3 groups agreed that treating elderly patients is time-consuming. Respondents who had stopped treating elderly patients in long-term care facilities were more neutral regarding the statement that these patients present difficulties because of medical problems or dementia, whereas dentists who were currently treating or had never treated these patients perceived medical problems and dementia as difficulties for service provision.

Comparisons of Perceptions about Various Aspects of Treating Elderly Patients

Attitudes and perceptions of the 3 groups of dentists in the current survey were compared by means of exploratory factor analysis, as described in the Methods section. Among dentists who were treating elderly patients in long-term care facilities, the strongest self-reported concerns were that these patients rarely follow recommended treatment (loading 0.828) and that treating elderly patients is financially unrewarding (loading 0.706) (Table 4). The latter concern was also of high importance to dentists who had stopped treating patients in long-term care facilities (loading 0.835) and to dentists who had never treated such patients (loading 0.704).

The importance of patients’ age was also perceived differently by the 3 groups of respondents. Dentists who had never treated elderly people gave more importance to patients’ age (loading 0.544) than dentists who were currently treating patients in long-term care facilities

(loading 0.162) or had stopped treating these patients (loading 0.109).

The most substantial difference among the 3 groups of respondents related to perceptions that treating elderly patients was a pleasant or unpleasant experience. Dentists who were currently treating elderly patients perceived such treatment as pleasant (loading 0.516), whereas the opposite was true for dentists who had stopped treating patients in long-term care facilities (loading -0.424) and for dentists who had never treated elderly patients (loading -0.673).

Patterns of Perceptions among Dentists Currently Treating Patients in Long-Term Care Facilities

More specific insights into the perceptions of dentists currently treating patients in long-term care facilities appear in Table 5. Three common patterns of perceptions were identified: important considerations, reasons for providing care and different aspects related to the provision of care, each described in more detail below.

The 3 most important considerations in dentists’ decision to treat or not to treat elderly patients in long-term care facilities were amount of personal time (loading 0.797), remuneration (loading 0.746) and distance to the facility (loading 0.667). The least important consideration was personal satisfaction in working with elderly people (loading 0.191) (Table 5).

The most important reasons for providing care in long-term care facilities were to broaden the scope of practice (loading 0.741), to take advantage of the opportunity to increase one’s practice (loading 0.657) and being asked to work in this setting (loading 0.650). The

Table 5 Common patterns of perceptions among dentists currently treating patients in long-term care facilities^a

Patterns and indicators ^b	Loading ^c
Important considerations in providing care in long-term care facilities	
1. How important is amount of private practice time in your decision to treat patients in long-term care?	0.621
2. How important is amount of personal time in your decision to treat patients in long-term care?	0.797
3. How important is the distance to the facility in your decision to treat patients in long-term care?	0.667
4. How important is remuneration in your decision to treat patients in long-term care?	0.746
5. How important is the availability of dental operatory and equipment at the facility in your decision to treat patients in long-term care?	0.603
6. How important is personal satisfaction in working with elderly people in your decision to treat patients in long-term care?	0.191
7. How important is experience or training in treating elderly people in your decision to treat patients in long-term care?	0.281
Reasons for providing care in long-term care facilities	
8. I decided to treat in long-term care facilities because it was an opportunity to increase my practice.	0.657
9. I decided to treat in long-term care facilities because social contacts with elderly people are rewarding.	0.619
10. I decided to treat in long-term care facilities because I wanted to perform a public service.	0.586
11. I decided to treat in long-term care facilities because it is part of professional responsibilities.	0.098
12. I decided to treat in long-term care facilities because of part-time practice opportunities.	0.508
13. I decided to treat in long-term care facilities because it is part of a semi-retirement practice.	0.504
14. I decided to treat in long-term care facilities because it broadens the scope of my practice.	0.741
15. I decided to treat in long-term care facilities because I was asked to do so.	0.650
16. I decided to treat in long-term care facilities because a past patient or family member was in a long-term care facility.	0.231
Aspects of care provision	
17. Dental hygienists are important members of the clinical team in long-term care facilities.	0.752
18. Certified dental assistants are important members of the clinical team in long-term care facilities.	0.793
19. Continuing education beyond dental school would be helpful to treat patients in long-term care.	0.903
20. Additional paperwork such as consent for treatment is a concern.	0.400

^aCommon patterns are indicated by bold type; indicators are shown in plain text.

^bIndicators were measured with Likert scales, as described in Table 1.

^cLoading values (ranging from a minimum of 0 to a maximum of 1.0) were determined by the extraction method of exploratory factor analysis, combined with a principal component analysis. A higher loading of perception indicates higher self-perceived importance of this perception relative to other, less important perceptions.

least important reasons were that such care was part of the dentist’s professional responsibilities (0.098) and the fact that a past patient or family member was living in a long-term care facility (0.231) (Table 5).

The most important aspects of care provision were having undertaken continuing education beyond dental school (loading 0.903) and having dental hygienists (loading 0.752) and dental assistants (loading 0.793) as members of the clinical team in the long-term care facility. Having to do additional paperwork, including ob-

taining informed consent, was perceived as having less importance (loading 0.400) (Table 5).

Analysis of Trends over Time: Comparison with 1985 Data

In a comparison of data obtained in a 1985 survey of Vancouver dentists and data for Vancouver respondents to the 2008 survey, respondents to the 1985 survey were younger (percentage ≤ 35 years of age 36% vs. 3%; $p < 0.001$) and had fewer years in practice (percentage with no more than 5 years experience 18% vs. 1%; $p < 0.001$)

Table 6 Personal characteristics of dentists in metropolitan Vancouver

Factors	Year; no. (%) of respondents		χ^2
	1985 ^a (n = 334)	2008 (n = 87)	
Age (years)			
≤ 35	120 (36)	3 (3)	37.9 (df = 4) <i>p</i> < 0.001
36–45	103 (31)	36 (41)	
46–55	49 (15)	30 (34)	
56–65	41 (12)	10 (11)	
≥ 65	14 (4)	4 (5)	
No response ^b	7 (2)	4 (5)	
Years in practice			
≤ 5	61 (18)	1 (1)	19.5 (df = 4) <i>p</i> < 0.001
6–15	129 (39)	34 (39)	
16–25	72 (22)	28 (32)	
26–35	44 (13)	18 (21)	
≥ 36	21 (6)	5 (6)	
No response ^b	7 (2)	1 (1)	
% of patients aged ≥ 65			
1–4	15 (4)	0 (0)	36.9 (df = 4) <i>p</i> < 0.001
5	140 (42)	10 (11)	
6–10	83 (25)	19 (22)	
11–24	64 (19)	33 (38)	
≥ 25	29 (9)	22 (25)	
No response ^b	3 (1)	3 (3)	
Advanced training in geriatric dentistry			
No	159 (48)	76 (87)	11.7 (df = 1) <i>p</i> < 0.001
Yes	75 (22)	10 (11)	
No response ^b	100 (30)	1 (1)	
Type of advanced training^c	(n = 75)	(n = 10)	
Clinical and lectures	21 (28)	3 (30)	16.7 (df = 2) <i>p</i> < 0.001
Lectures	13 (17)	4 (40)	
Clinical	41 (55)	3 (30)	

^aData for 1985 from MacEntee et al.¹¹

^bThe “no response” category was not included in the statistical analyses.

^cPercentages based on number of respondents who reported having advanced training.

(Table 6). The 2008 cohort had a higher proportion of elderly patients (65 years of age or older) than the 1985 cohort (*p* < 0.001).

In both 1985 and 2008, the percentage of dentists with advanced training in geriatric dentistry was relatively

low. Nonetheless, significantly more respondents to the 1985 study had this type of advanced training (22% vs. 11%) (*p* < 0.001).

The percentage of respondents who had never provided services to elderly people who were concerned

Table 7 Self-reported reasons for not providing services and stopping services in long-term care facilities

Reason ^a	Year; no. (%) of responses		χ^2
	1985 ^b	2008	
For not providing services	271 (100)	152 (100)	
Too busy in private practice	85 (31)	58 (38)	10 (df = 1) $p = 0.002$
Inadequate training and experience with medically compromised patients	64 (24)	41 (27)	16.9 (df = 1) $p < 0.001$
Financially costly and unrewarding	42 (15)	41 (27)	63.4 (df = 1) $p < 0.001$
Bureaucratic barriers would hinder proper treatment of patients	33 (12)	34 (22)	32.1 (df = 1) $p < 0.001$
Lack of appropriate treatment facilities	95 (35)	44 (29)	0.5 (df = 1) $p = 0.47$
I have not been asked by residents, administrators or family	152 (56)	55 (36)	1.4 (df = 1) $p = 0.24$
For stopping treatment	66 (100)	44 (100)	
Lack of demand for services	21 (32)	6 (14)	5.7 (df = 1) $p = 0.017$
Administrative difficulties in management of patients	8 (12)	24 (55)	20.2 (df = 1) $p < 0.001$
Financially unrewarding	6 (9)	21 (48)	33.5 (df = 1) $p < 0.001$
Loss of leisure time	9 (14)	14 (32)	8.6 (df = 1) $p = 0.003$
Increasing commitments to private office practice	24 (36)	24 (55)	1.4 (df = 1) $p = 0.24$
Professionally unsatisfying	11 (17)	10 (23)	8 (df = 1) $p = 0.005$

^aMultiple answers permitted.

^bData for 1985 from MacEntee and colleagues.¹¹

about a lack of appropriate treatment facilities (35% vs. 29%) and the percentage who had not been asked by residents, administrators or family members to provide care in long-term facilities (56% vs. 36%) were similar in 1985 and 2008 (Table 7). Among dentists who had never provided services, a greater percentage in 2008 than in 1985 reported being too busy in private practice to undertake care of residents in long-term care facilities (38% vs. 31%; $p = 0.002$). Bureaucratic barriers were perceived as hindering proper treatment of patients by more of the respondents in 2008 than in 1985 (22% vs. 12%) ($p < 0.001$).

Among Vancouver dentists who had stopped providing services, about one-third of those responding to the 1985 survey but only 14% of those responding to the 2008 survey reported a lack of demand for services in long-term care facilities ($p = 0.017$). More dentists in 2008 than in 1985 identified administrative difficulties in patient management as a concern (55% vs. 12%; $p < 0.001$). Among respondents who stopped providing treatment in long-term care facilities, 36% of those in the 1985 survey and 55% of those in the 2008 survey reported increasing commitments to private office practice as a reason ($p = 0.24$). An increase in the perceived lack of finan-

cial reward was one of the main changes from 1985 to 2008 (9% vs. 48%; $p < 0.001$). Similarly, a greater proportion of respondents in 2008 than in 1985 perceived treating elderly patients in long-term care facilities as professionally unsatisfying (23% vs. 17%; $p = 0.005$).

Discussion

This study examined perceptions of dentists who currently provide or do not provide services in long-term care facilities and compared the results with data from a similar survey conducted in 1985. In 2008, the proportions of dentists who were currently treating patients in long-term care facilities (15%) and who had stopped treating them (19%) were substantially lower than the proportion who never treated elderly patients (66%). This result confirms the previously reported concern¹⁴ that relatively few dentists decide to serve older patients. The percentage of rural dentists was higher than the percentage of urban dentists among respondents who were currently treating (19% v. 12%) and among those who had stopped treating patients in long-term care facilities (30% v. 18%). Perhaps there is more interest among rural dentists than among their urban counterparts in the issue of treating patients in long-term care facilities.

Substantial shifts in demographics and in the perceptions of dentists practising in Vancouver occurred between 1985 and 2008. Dentists responding to the 2008 survey were older, had practised longer and had more patients who were 65 years of age or older than respondents to the 1985 survey.

A lack of administrative and financial support for dental services, time constraints, difficulty in providing care and lack of training have previously been identified as barriers to providing dental care in long-term care facilities.^{11,13} Unfavourable working conditions in long-term care facilities were identified by 56% of dentists surveyed in Germany.¹⁵ In addition, 32% identified administrative and financial barriers as difficulties in treating patients in long-term care facilities, whereas only 5% were concerned about the patient's age.¹⁵ In a Belgian study, 63% of respondents identified absence of dental equipment in long-term care facilities as a barrier to care.¹⁶ In British Columbia, dentists responding to surveys in 1985 and 2008 who provided dental care in long-term care facilities found the experience more pleasant than dentists who had either stopped treating or had never treated this patient population. In the present study, the required commitment of personal time and lack of remuneration were among the most important barriers identified by dentists who were currently treating patients in long-term care facilities. Another recent study showed that a majority of Canadian dentists (81%) supported a governmental role in dental care and suggested that persons in long-term

care facilities should be publicly insured,¹⁷ which would alleviate some of these financial concerns.

In the present study, dentists currently serving elderly patients living in institutions reported continuing education as an important aspect facilitating their provision of care in this setting. However, among Vancouver dentists responding to the 2 surveys, only 22% of those in 1985 and 11% of those in 2008 had advanced education in geriatrics. Torrible and colleagues¹⁸ have suggested that increasing the number of undergraduate curriculum hours dedicated to geriatrics and providing positive geriatrician role models may help in addressing the poor attitudes of future medical professionals.

Data from the 1985 and 2008 surveys should be compared with caution, given that both studies had relatively low response rates, 51% and 31%, respectively. A high rate of nonresponse is a common problem in medical and dental surveys.¹⁹⁻²⁴ One problem in this situation is that answers from those who do respond might differ in some systematic way from the answers that would have been provided by nonresponders. For the 2008 study, a non-response analysis was performed, which showed no systematic differences between responders and nonresponders in terms of sex, years of practice, urban vs. rural setting and location of practice. Given that the main focus of the present inquiry was to understand the perceptions and viewpoints of BC dentists as they pertain to providing care in long-term care facilities, nonresponse might have an additional meaning. It is possible that the proportion of all dentists not willing to provide service in long-term care facilities was even higher than that observed in the present study, since individuals who are interested in the survey topic are more likely to respond.^{20,25-27} In another study, reasons for nonresponse were questionnaires getting lost in other paperwork (34%), survey recipients being too busy (21%) and survey recipients choosing not to fill out the survey (16%).²⁶ In the current study, the low response rate may reflect a lack of interest in geriatric dentistry among dental practitioners. This explanation coincides with the findings presented here, specifically that there were more rural dentists among those providing services in long-term care facilities.

The Canadian population is aging, and the majority of older people are now dentate,²⁸ but this study indicates that only a small fraction of BC dentists are treating elderly people living in institutions. Some initiatives currently under way may help to address this situation. For example, the Canadian Dental Association has developed a position statement about access to care, which acknowledges the strengths and weaknesses of oral health care and seeks solutions to fill apparent service gaps.²⁹ Also, if geriatric dentistry were to be accepted as a specialty program, it might become more attractive as a career path for dentists.²⁸

Conclusion

Relatively few BC dentists responding to this survey had chosen to provide dental care in long-term care facilities, and a substantial number had decided to stop providing such services. Among those who were providing this type of service, the most important consideration was a desire to broaden their practice. Dentists treating patients in long-term care facilities usually preferred to be paid on a fee-for-service basis rather than a sessional (retainer) fee. A substantially greater proportion of respondents to this 2008 study than to a similar study conducted in 1985 identified administrative difficulties in patient management as a barrier to providing this type of care. ♦

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