

## Criteria Used by General Dentists To Choose an Orthodontist

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Orthodontists have always relied heavily on referrals from general practitioners for the majority of their patients.<sup>1</sup> However, recent changes in the management of dental and orthodontic practices have altered the traditional GP-specialist referral relationship. In 1984, Gottlieb listed a number of threats to the traditional referral- source practice: paid referral services, closed-panel dental insurance, large "one-stop-shopping" dental clinics with in-house orthodontists, and an increasing number of general dentists practicing comprehensive orthodontics.<sup>2</sup>

Today, nationwide management service organizations circumvent the traditional GP referral system by advertising directly to the general public. In addition, as many as 19% of general dentists may practice comprehensive orthodontics without referring to specialists.<sup>3</sup>

To counteract these trends, orthodontists might begin marketing directly to the public, increase their numbers of internal referrals, or improve their GP referral systems. This study will address the last of these options by evaluating how general dentists choose orthodontists for referrals.

The literature on this subject is limited. In 1991, Church-Clark sent a survey with seven questions to an unspecified number of GPs throughout the United States.<sup>4</sup> She found that the major determinants for referrals were good verbal and written communications, routinely referring patients back to the GP, and carefully monitoring oral hygiene. An unpublished survey of the criteria used by general dentists in referring to any specialists showed that the major considerations were the specialist's reputation for producing consistent high-quality results, positive feedback from patients, the specialist's particular area of expertise, and communications.<sup>5</sup>

At the same time our study was being performed, the AAO conducted a similar survey of general dentists.<sup>6</sup> Out of 5,000 surveys mailed, 400 responses were received. More than 90% of the GPs indicated that the orthodontist's treatment philosophy, a good relationship with the orthodontist, and a superior source of orthodontic care were important in their decision, while 73% reported that location of the orthodontist's office was important. Participation in the same managed-care plan appeared to be of little importance. Overall, 90% were satisfied with the quality of orthodontic treatment their patients were receiving, and only 3% were dissatisfied.

Our survey is more narrow in focus than the AAO's, concentrating on the criteria general dentists use to choose an orthodontist.

### **Methodology**

To develop the survey instrument, 10 GPs, five orthodontists, and three practice-management experts were interviewed. Their ideas were added to material derived from the dental and medical literature.<sup>7,8</sup> A total of 33 factors contributing to the referral decision were identified; these were grouped into six categories: cost, convenience, communication, reciprocation, quality, and relationships.

Each item was presented as a two-part question, with responses given on a scale of 1-5 (from least

important to most important). Part A asked how well each statement applied to or described the orthodontist last referred to; Part B asked how important each of the items was to the GP in making the usual referral decision. The two-part questions made it possible to determine whether the general dentists' referral behavior coincided with their stated opinions.

Seven characteristics of the general dental practice that might influence the referral decision were addressed through questions on the second page of the survey (Table 1). In addition, practice location was determined by the postmark on the envelope. Respondents were grouped into nine regions, according to ADA guidelines (Table 2), which have been used in past orthodontic surveys. 1

A pilot survey was conducted on 10 local dentists to test the clarity of the questions and validate the survey instrument. After necessary changes were made, the survey was prepared for mailing. A random sample of 2,000 general dentists throughout the United States was generated by the ADA, based on the following criteria:

1. Active members of the ADA
2. Three to 23 years in practice
3. Actively practicing three or more days per week
4. Area served by two or more orthodontists

Each confidential survey was sent with a self-addressed, stamped envelope. A follow-up postcard reminder was sent to the entire sample three days later. Our mailing of 2,000 surveys yielded 415 responses (a 20.5% response rate). Of these, 38 of the questionnaires were unusable because they did not meet the inclusion criteria listed above. Thus, 377 surveys were used to calculate the results.

Responses were entered into a computer data base for analysis. The dentists' answers from Part A of the questionnaire were compared to their answers from Part B using Spearman's rank-order correlation.

## Results

The median number of years in practice was 15, with 22% of the respondents in practice for 10 years or less and 20% in practice for more than 18 years (Fig. 1). These dentists tended to have average-to-above-average-size practices, and 95% practiced four or more days per week. About 48% had two to four orthodontists to refer to within a reasonable distance, 39% had five to ten, and 13% had more than 10 (Fig. 2). Overall, the GPs rated their knowledge of orthodontics as average. Some 86% of the dentists reported treating no comprehensive orthodontic cases (Fig. 3).

Nearly 75% of the dentists referred between two and six orthodontic patients per month, and another 18% referred more than six patients per month (Fig. 4). More than 80% gave out one or two business cards or referral options to each of these patients (Fig. 5), but nearly 75% said they usually recommended one of the orthodontists over the others. More than 80% preferred or strongly preferred referring to solo practitioners over orthodontic clinics. When asked how much control they had over where their patients went for orthodontic care, more than 70% felt they had a greater than average level of influence.

Table 3 shows the frequencies of the responses to each of the 33 questions (Part B), grouped

according to category. For purposes of discussion, answers of 1 and 2 on the scale of importance are added together as "unimportant", while answers of 4 and 5 are grouped as "important". Cost was relatively unimportant in the GPs' choice of referral. Only 15% indicated that accepting the same managed-care plan as the general dentist was important in their referral decisions. Convenient payment plans were fairly neutral in importance. About 72% of the respondents felt that the orthodontist's fees were not important. Responses to the item on free initial consultations were inconclusive, with 33% finding them unimportant and 38% important.

Convenience was generally considered more influential than cost in the referral decision. Three-quarters of the dentists noted that it was important that orthodontists did not have a lengthy waiting list. "Proximity to dentist's office" and "finishes cases quickly" were only moderately important to the dentists, with roughly equal numbers having opposing views. Nearly 60% felt it was important that the orthodontist's office was in close proximity to their patient's homes, but fewer than 35% felt it was important for the orthodontist to be close to the GP's own office.

Communication was also a significant factor. Fully 85% of the respondents felt it was important that the orthodontist promptly responded to their calls. On the other hand, relatively few believed it was important that they be sent orthodontic educational materials. Nearly three-fourths of the GPs wanted their orthodontists to involve them in patients' treatment planning.

Reciprocation was the least important of all the categories to the referring dentists. Only 29% thought it was important that the orthodontists refer them new patients. Taking the GP out to lunch and giving gifts of appreciation received among the lowest importance scores in the entire survey (about 10% each). On the other hand, being thanked for referrals was considered much more important. One of the highest-rated items in the survey, listed as important by 94% of the GPs, was regularly sending patients back for cleanings and checkups.

Nearly all of the items in the quality category were considered important. More than 90% of the respondents gave "important" scores to superiority of clinical treatment, having common treatment philosophies, having positive past experiences with the orthodontist, patients returning happy, and a superior professional reputation. The highest rated of these was patients returning happy. Excellence in teaching and monitoring oral hygiene was important to about 87% of the GPs. Agreement with the orthodontists' extraction and nonextraction decisions was important to 71% of the respondents; an equal number indicated it was important that their orthodontists be Board-certified.

Items pertaining to relationship ranked relatively low. The only exception was sharing common values and beliefs, considered important by 67% of the dentists. Sharing common interests, however, was important to only 10%. Being friends while growing up or while in dental school was important to fewer than 5% of the respondents each. About 43% said it was important that the orthodontist was involved in organized dentistry or that the dentist's staff liked the orthodontist and staff. Being of similar age or in practice about the same length of time was not important to two-thirds or more of the dentists. Finally, patients' familiarity with the orthodontist was only moderately important, with 39% regarding it as unimportant and 32% as important.

Overall tabulations of the six categories showed quality as clearly the most important, with a mean score of 4.4 (Fig. 6). Communication and convenience were relatively important in the usual referral decision, with mean scores of 3.6 and 3.3, respectively. Reciprocation, cost, and relationship issues were of least importance to the GPs. Of course, as discussed above, there were specific items within these categories that were considered more influential than others.

Of the seven dental practice characteristics evaluated (Table 1), only three were found to make a difference in the referral criteria. GPs who said they had better than average knowledge of orthodontics expected a greater degree of communication (responses to calls, educational materials, and involvement in treatment plan). In areas with five or more orthodontists to choose from, convenience and reciprocation were more important in the GPs' referral decisions than in other areas. Interestingly, general dentists who performed either a great deal of comprehensive orthodontics or little or no orthodontics were more influenced than others by the quality of the orthodontists they referred to.

Finally, when the general dentists were asked how satisfied they were with their last orthodontic referral experiences, more than 93% reported being satisfied, with 66% very satisfied. The GPs who rated quality as the most important category were also the most likely to be very satisfied with their orthodontists.

## **Discussion**

The results of this study are generally in agreement with those of Wolsky and McNamara,<sup>3</sup> Church-Clark,<sup>4</sup> Alexander,<sup>5</sup> and the AAO.<sup>6</sup> The similarity of results and the geographic distribution of the respondents (Table 2) tend to confirm the validity of the data.

The question of whether answers were given honestly is a concern in any survey. It is human nature to provide answers that make ourselves look good or that justify our actions or beliefs. One could argue that quality and convenience would be the most "appropriate" factors to consider for the best interests of the dentist's patients, and that items dealing with the self-interests of the referring doctor—relationships and reciprocation—would tend to score lowest. That was indeed the case in this survey. Nevertheless, efforts were made to double-check the GPs' responses by asking each question twice, directly (Part B) and indirectly (Part A). There was a fairly close correlation between most of the answers from the two parts, suggesting that the answers were in fact reliable.

It is possible that the dentists' responses to Part A influenced their responses to Part B. After answering Part A, a dentist may have thought of the orthodontist usually referred to and then based the importance of each item in Part B on how well it applied to that orthodontist. In other words, dentists may be unlikely to admit something is important to them if the orthodontists they refer to perform poorly in that area. Therefore, the differences between answers to parts A and B may not mean simply that dentists don't act in accordance with their professed opinions; they may also indicate that qualities the dentists believe to be important are not found in orthodontists in their areas.

All of the results of this study should be interpreted with some degree of caution. Just because the general dentists rated an item as unimportant does not mean that it is a totally ineffective marketing device. It may be that superior performance in one of those areas could make the difference between gaining or losing a referral. In addition, some items that are less important to GPs (such as accepting the same managed-care plan or lower orthodontic fees) may be more important to many patients. Since "patients return happy" was one of the highest rated criteria in the GPs' referral decision, these factors may indirectly play a much greater role than the results indicate.

Most important, it should be stated that individual general dentists have different opinions of what is important to them. Orthodontists should take the time to informally or formally survey the general dentists in their own areas to find out what they expect from the orthodontists they refer to. □

**FIGURES**

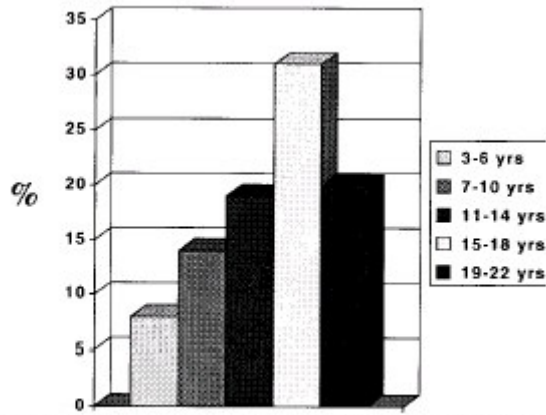
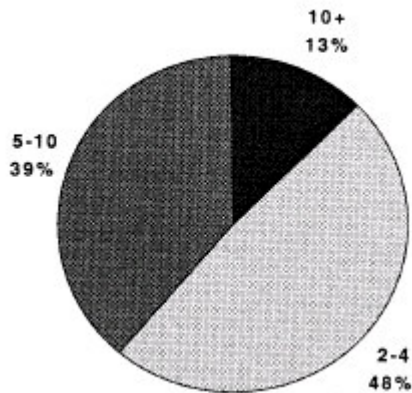
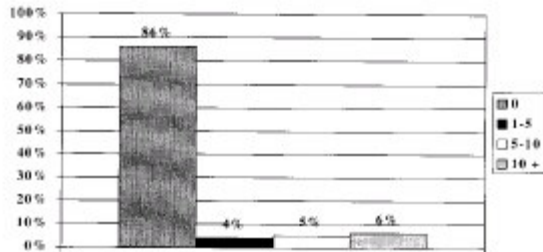


Fig. 1 Years in practice by percentage of respondents.

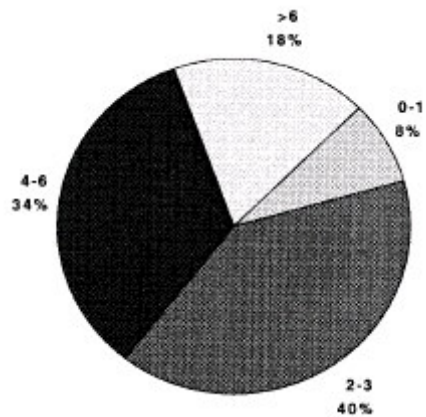
**Fig. 1** Years in practice by percentage of respondents.



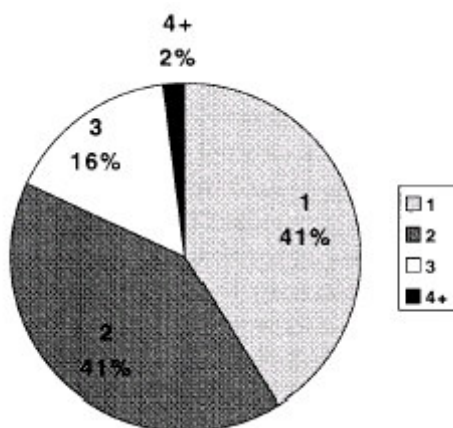
**Fig. 2** Number of orthodontists within reasonable referral distance.



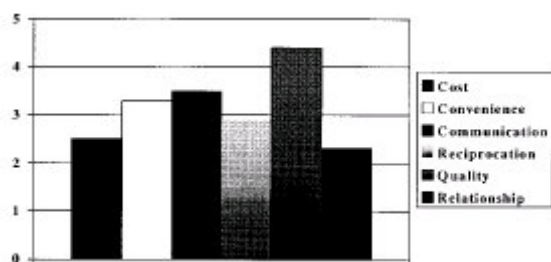
**Fig. 3** Number of comprehensive orthodontic cases treated per year.



**Fig. 4** Number of orthodontic referrals per month.



**Fig. 5** Number of options given per referral.



**Fig. 6** Mean scores in each category.

**TABLES**

**TABLE 1**  
**GENERAL DENTIST PRACTICE CHARACTERISTICS**

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1. How large/busy is your practice?
  2. Rate your overall knowledge of orthodontics.
  3. How many years have you been in practice?
  4. How many orthodontists do you have to choose from within a reasonable distance for your patients?
  5. How many patients do you refer to an orthodontist per month?
  6. If you perform comprehensive orthodontic treatment in your practice, how many cases do you start each year?
  7. How many orthodontists do you usually refer to at one time (i.e., how many business cards do you hand out at a time)?
  8. How likely are you to refer your patients to an orthodontic clinic vs. a solo practitioner?
  9. Do you usually recommend one orthodontist more highly than the others?
  10. How much control do you feel you have over where your patients receive orthodontic care?
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**Table. 1**

**TABLE 2**  
**DISTRIBUTION OF RESPONSES BY ADA REGION**

	Percentage Mailed	Percentage Returned
New England (CT,ME,MA,NH,RI,VT)	6.1	3.2
Middle Atlantic (NJ,NY,PA)	18.4	12.5
South Atlantic (DE,DC,FL,GA,MD,NC,SC,VA,WV)	15.6	12.2
East South Central (AL,KY,MS,TN)	4.0	4.5
East North Central (IL,IN,MI,OH,WI)	16.6	19.7
West North Central (IA,KS,MN,MO,NE,ND,SD)	6.8	7.7
West South Central (AR,LA,OK,TX)	8.7	6.1
Mountain (AZ,CO,ID,MT,NV,NM,UT,WY)	5.4	11.7
Pacific (AK,CA,HI,OR,WA)	17.4	15.2

**Table. 2**



**TABLE 3**  
**RESPONSES TO ITEMS IN PART B (%)**

	Not Important				Very Important
	1	2	3	4	5
<i>Cost</i>					
1. Accepts patient's managed-care plan	60	11	14	7	8
2. Convenient payment plan	14	14	35	26	11
3. Orthodontist's fee is lower	54	18	22	5	1
4. Free initial consult	25	8	30	21	17
<i>Convenience</i>					
5. No lengthy waiting list	2	6	18	49	26
6. Proximity to dentist's office	22	15	30	21	12
7. Finishes cases quickly	18	18	37	20	7
8. Proximity to patient's home	6	8	27	38	21
<i>Communication</i>					
9. Promptly responds to calls	1	1	14	39	46
10. Sends orthodontic educational material	30	25	26	11	8
11. Involves GP in patient's treatment plan	1	7	21	37	34
<i>Reciprocation</i>					
12. Refers GP new patients	21	23	28	16	13
13. Takes GP out to lunch	59	18	15	6	3
14. Sends gifts of appreciation	47	26	16	7	3
15. Thanks GP for referrals	5	13	28	29	25
16. Refers patient back for checkups	0	1	4	27	67
<i>Quality</i>					
17. Superiority of clinical treatment	1	1	3	21	74
18. Common treatment philosophies	1	0	6	35	59
19. Positive past experience	0	0	6	26	68
20. Teaches and monitors oral hygiene	0	1	11	40	47
21. Agree with extraction decisions	4	5	20	32	39
22. Orthodontist is Board-certified	9	5	15	30	41
23. Patients return happy	0	1	2	18	79
24. Superior professional reputation	0	1	5	22	72
<i>Relationships</i>					
25. Common values and beliefs	4	5	24	35	32
26. Friends growing up	90	7	3	0	0
27. Involved in organized dentistry	12	15	30	28	15
28. GP staff likes orthodontist and staff	13	11	30	28	18
29. Share common interests	51	21	18	8	2
30. Orthodontist is similar age	61	17	16	6	1
31. In practice same amount of time	44	22	24	8	2
32. Patient is familiar with orthodontist	17	22	30	23	9
33. Friends while in dental school	80	10	7	2	1

**Table. 3**

## REFERENCES

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