2005 JCO Orthodontic Practice Study
Part 1 Trends

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This series of articles shows the highlights of the latest biennial JCO Orthodontic Practice Study. Because JCO has conducted a nationwide survey of the economics and administration of U.S. orthodontic practices every two years since 1981, we can, in this first installment, describe the overall trends in orthodontics over more than two decades. Future issues will point out methods and policies that seem related to practice success and growth, along with other variables of general interest. JCO subscribers can access the complete tables and questionnaire on our website at www.jco-online.com, using the link from this article in the Online Archive.

Practice Activity

A slight downturn in the orthodontic economy, first seen in the 2003 Practice Study, continued in the present report. The median gross income remained unchanged for the first time, staying at $800,000, although operating expenses rose by 10% and net income by 4% since 2003 (Table 1). After an increase in 2003, the median overhead rate declined to 53%. The median number of case starts dropped for the second consecutive Study, and total active cases for the first time, both returning to near 1999 levels. With the percentage of adult case starts reaching its highest level since 1989, this appears to reflect a reduction in the number of adolescent patients.

Orthodontists continued to raise their child case fees by about 4% per year, but the median adult fee rose by a total of only 4% in the two years between 2002 and 2004. Although the percentage of practices accepting assignment of benefits declined for the second consecutive Study and the median percentage of gross income attributed to insurance was the lowest since 1985, the percentage of patients covered by third parties was the highest ever reported. More than 73% of the respondents said they offered third-party financing such as Orthodontists Fee Plan—up from about two-thirds of the practices in 2003 and 2001, when this question was first included on the questionnaire.

The number of patients billed routinely continued to approach 50%. The median number of patients treated per day remained at 50, where it has been since 2001. As in every previous survey, respondents said they could handle 50 additional patients without increasing the size of their staff or facility. When respondents were asked, for the first time, how many more patients they could accommodate by adding staff, the median reply was 100—an indication that the average practice could delegate more chairside duties if case acceptance could be increased.

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Years in Practice

The average amount of experience of respondents to the Practice Study continued a gradual increase, with the median age remaining at 50 and the median number of years in practice increasing by one (to 19) since the 2003 report. As in the last survey, income production appeared to rise sharply until about 10 years in practice, but to drop off after 25 years (Table 2).

The only practice age category in which median gross income increased over the past two years was the 11-to-15-year group. Median net income, on the other hand, increased in every age category except for those in practice less than six years. Overhead rates declined slightly in each group other than those in practice between 11 and 20 years. As in past Studies, there seemed to be no relationship between practice experience and child or adult case fees.

METHODOLOGY AND LIMITATIONS

The 2005 JCO Orthodontic Practice Study questionnaire was mailed on May 25, 2005, to 9,611 practitioners who had identified themselves as orthodontists. We believe this sample represented virtually all of the specialty practitioners in the United States. A total of 606 forms were returned, for a response rate of 6%.

Data from the questionnaires were entered on computer by an independent company, and analysis was performed using the Statistical Package for the Social Sciences.

In every Practice Study, we have disregarded forms that were blank or illegible, and we have made several general exclusions. To ensure that these reports cover only full-time, solo practices, respondents with less than one year in practice, with more than one owner, or with a gross income of less than $60,000 *and* fewer than 50 case starts in 2004 were excluded from the tabulations. Those deletions left 506 questionnaires for data analysis. Any individual responses that were clearly erroneous or beyond the range of possibility were recoded as missing before the final calculations so they would not improperly influence the tables.

For clarity and comprehensibility, we have omitted some of the biennial Studies from the trend tables shown in this article. While these figures can all be found in previously published reports, the trends have generally been steady from one survey to the next. Annual figures such as income and numbers of cases refer to the preceding calendar year—in the present case, 2004.

Throughout the tables, we usually report the median, which is the middle response when all responses are sorted from highest to lowest, instead of the mean, which is the arithmetic average. The median is less likely than the mean to be affected by extremely high or low answers, but can create some apparent discrepancies when responses in various categories are compared, since each median figure is calculated independently. In tables requiring tests of statistical significance, only means can be used. We chose to recognize a “p” level of .01 as an indication of significance, rather than the more conventional .05, because the large number of variables in the Study increases the possibility that the results might be affected by chance.

Note that a statistical relationship does not prove a causal relationship. If respondents who delegated a certain task, for example, are found to have significantly higher net income than those who did not delegate that task, it does not necessarily mean that the delegation was solely responsible for the increase in income.

Another limitation of this Study is that it would be impossible to verify the accuracy of each individual response. Still, based on the geographic distribution of the respondents and the consistency of results during the 24 years we have been conducting Practice Studies, we believe this report to be valid.

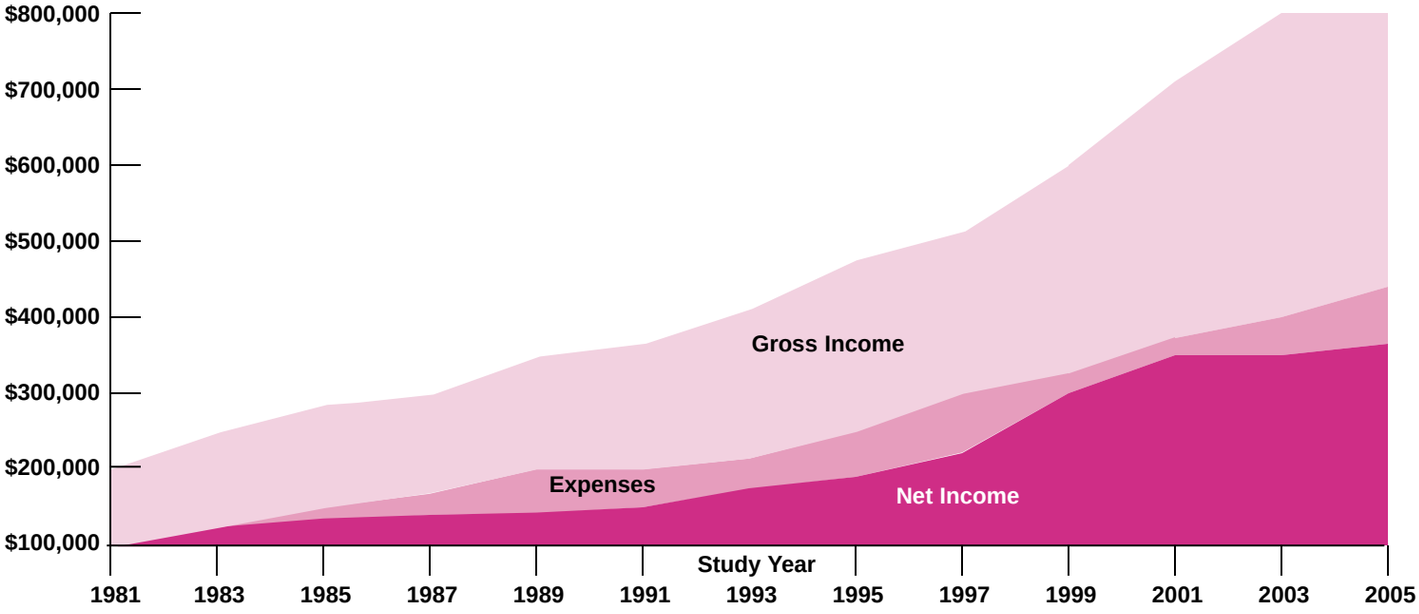

TABLE 1
PRACTICE ACTIVITY (MEDIANS)

	Year of Study*					
	1981	1987	1993	1999	2003	2005
Age	42	44	47	49	50	50
Years in Practice	12	15	16	19	18	19
Gross Income	$200,003	$300,010	$414,000	$600,000	$800,000	$800,000
Expenses	$100,003	$184,984	$228,400	$325,000	$400,000	$440,000
Net Income	$102,000	$139,993	$175,000	$300,000	$350,000	$365,000
Overhead Rate	49%	53%	56%	53%	54%	53%
Case Starts	150	150	160	200	212	200
Adult Case Starts	15.4%	23.8%	20.2%	18.8%	18.8%	22.2%
Active Treatment Cases	300	350	366	450	500	460
Female Active Cases	NA	NA	60.0%	60.0%	59.5%	58.9%
Adult Active Cases	15.2%	24.0%	18.2%	15.5%	16.7%	19.0%
Adult Female/Adult Active Cases	NA	NA	70.6%	69.8%	67.8%	67.3%
Child Fee (permanent dentition)	$1,900	$2,500	$3,200	$3,880	$4,390	$4,700
Adult Fee	$2,100	$2,700	$3,500	$4,200	$4,800	$5,000
Two-Year Fee Increase (reported)	15.5%	10.3%	10.0%	8.0%	8.0%	8.0%
Initial Payment	25%	25%	25%	25%	25%	25%
Payment Period (months)	24	24	24	24	22	22
Patients Routinely Billed	30.9%	28.3%	38.5%	47.2%	49.6%	49.7%
Patients per Day	38.4	40.2	40.0	45.0	50.0	50.0
Additional Cases That Could Have Been Handled	49.9	50.0	50.0	50.0	50.0	50.0
Patients Covered by Third Party	35.3%	38.7%	45.0%	40.0%	45.0%	50.0%
% Gross Attributed to Third Party	20.0%	20.1%	25.0%	25.0%	25.0%	20.0%
Accept Assignment of Benefits	37.5%	49.5%	68.2%	76.4%	77.4%	73.7%

*Dollar amounts and numbers of patients refer to preceding calendar year.

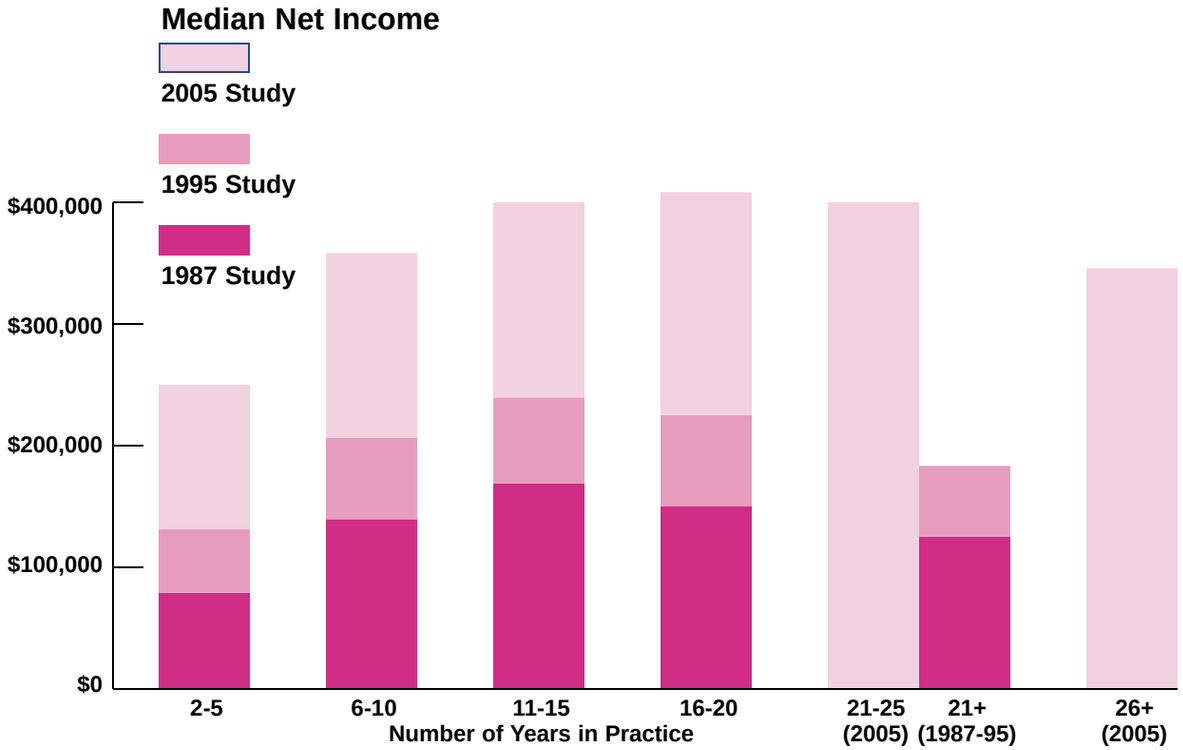

TABLE 2
PRACTICE ACTIVITY (MEDIANS) BY YEARS IN PRACTICE

	2005 Study					
	2-5	6-10	11-15	16-20	21-25	26 or more
Gross Income	$617,000	$799,000	$895,000	$892,500	$900,000	$720,000
Expenses	$325,000	$420,000	$500,000	$500,000	$414,797	$400,000
Net Income	$250,000	$357,500	$400,000	$408,500	$400,000	$345,000
Overhead Rate	54%	52%	54%	58%	51%	54%
Case Starts	150	210	250	231	191	180
Active Cases	380	350	521	594	495	410
Child Fee	$4,500	$4,695	$4,550	$4,700	$4,720	$4,783
Adult Fee	$4,900	$5,000	$4,995	$5,117	$4,998	$5,200

	2003 Study					
	2-5	6-10	11-15	16-20	21-25	26 or more
Gross Income	$620,000	$825,000	$800,000	$930,000	$946,700	$750,000
Expenses	$304,200	$427,500	$400,000	$440,000	$437,000	$375,000
Net Income	$300,000	$352,500	$365,250	$385,800	$395,000	$320,000
Overhead Rate	55%	53%	53%	53%	53%	55%
Case Starts	200	256	225	240	232	191
Active Cases	360	500	500	560	550	450
Child Fee	$4,300	$4,500	$4,390	$4,380	$4,300	$4,480
Adult Fee	$4,540	$4,800	$4,800	$4,825	$4,755	$4,825

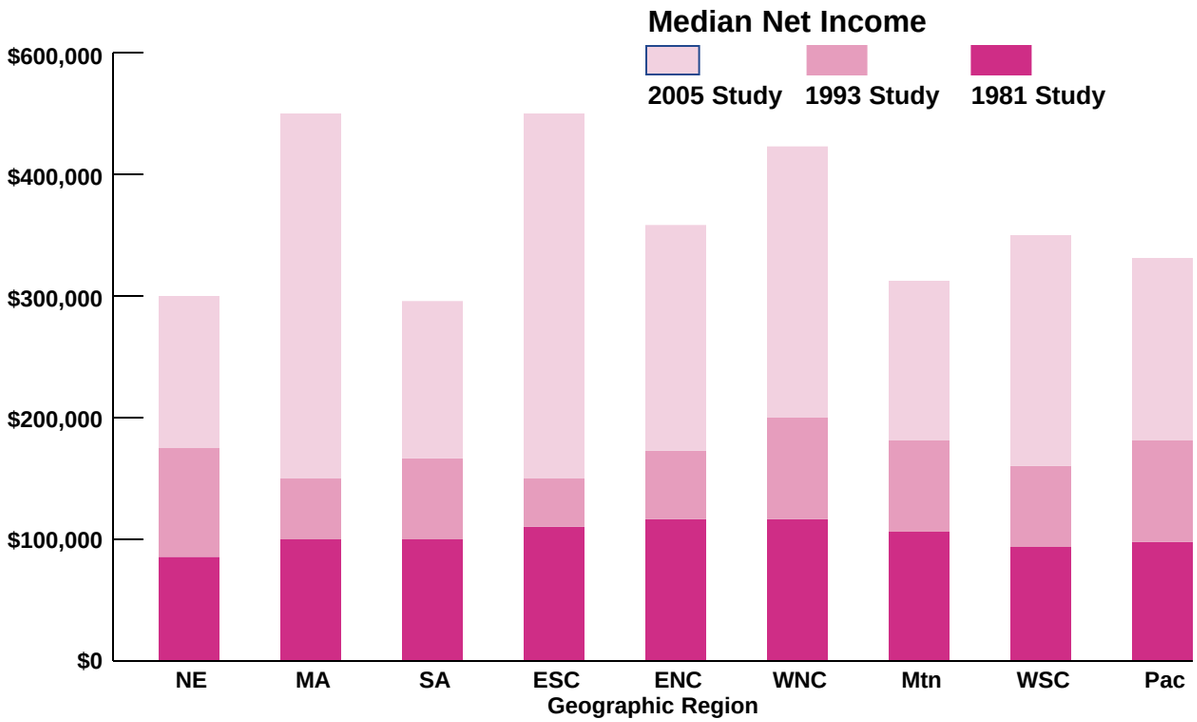

TABLE 3
PRACTICE ACTIVITY (MEDIANS) BY GEOGRAPHIC REGION

	Gross Income	Net Income	Overhead Rate	Case Starts	Child Fee
New England (CT,ME,MA,NH,RI,VT)	$780,000	$300,000	51%	217	$4,875
Middle Atlantic (NJ,NY,PA)	1,000,000	550,000	49%	221	4,625
South Atlantic (DE,DC,FL,GA,MD,NC,SC,VA,WV)	790,000	295,000	57%	183	4,800
East South Central (AL,KY,MS,TN)	1,200,000	550,000	51%	200	4,250
East North Central (IL,IN,MI,OH,WI)	813,000	358,034	53%	200	4,790
West North Central (IA,KS,MN,MO,NE,ND,SD)	1,000,000	422,500	57%	300	4,750
Mountain (AZ,CO,ID,MT,NV,NM,UT,WY)	710,000	313,000	54%	200	4,700
West South Central (AR,LA,OK,TX)	741,615	350,000	51%	200	4,500
Pacific (AK,CA,HI,OR,WA)	800,000	330,000	55%	212	4,800

Geographic Region

Since the 2001 Study, median net income increased only for respondents in the Middle Atlantic, East South Central, and Pacific regions, and remained the same in the West South Central region (Table 3). Median overhead rates declined or were unchanged in every region except New England, South Atlantic, West North Central, and Mountain.

Median numbers of case starts increased only in the New England, Middle Atlantic, and West North Central regions since the last report, but stayed the same in the East and West South Central regions. The only area in which the median child case fee fell outside a range of $4,500-4,875 was the East South Central, at $4,250.

Use of Management Methods

Of the 26 management methods surveyed, only four—written practice plan, individual performance appraisals, patient satisfaction surveys,

TABLE 4
USE OF MANAGEMENT METHODS

	Year of Study					
	1981	1987	1993	1999	2003	2005
Written philosophy of practice	22.1%	34.2%	44.5%	48.5%	52.3%	50.7%
Written practice objectives	15.0	24.6	32.0	30.6	33.9	30.1
Written practice plan	NA	12.6	20.4	19.1	21.9	22.8
Written practice budget	6.5	11.7	15.2	17.0	18.8	17.5
Office policy manual	54.7	59.7	69.7	72.9	78.8	77.2
Office procedure manual	NA	48.0	54.4	51.6	57.0	53.9
Written job descriptions	38.2	42.7	53.2	55.7	60.9	59.7
Written staff training program	NA	18.0	34.2	29.2	37.2	28.8
Staff meetings	67.7	78.5	83.0	80.6	82.1	80.4
Individual performance appraisals	32.3	48.9	54.0	59.3	62.1	63.5
Measurement of staff productivity	NA	11.8	16.4	15.8	17.2	16.7
In-depth analysis of practice activity	24.3	31.5	34.2	32.3	33.7	31.5
Practice promotion plan	NA	25.3	27.2	35.1	34.6	33.0
Dental management consultant	16.2	17.3	20.8	19.1	19.1	18.4
Patient satisfaction surveys	12.6	26.1	28.6	29.0	28.9	29.0
Employee with primary responsibility as communications supervisor	NA	25.8	29.7	25.9	23.8	23.6
Progress reports	NA	45.0	49.6	44.0	39.0	37.2
Post-treatment consultations	NA	44.3	41.6	36.6	33.9	31.5
Pretreatment flow control system	NA	48.4	50.9	48.4	43.0	44.3
Treatment flow control system	NA	18.6	22.7	25.1	25.2	23.8
Cases beyond estimate report	NA	18.7	22.6	25.1	32.3	30.5
Profit and loss statement	NA	65.6	70.3	73.6	74.8	70.1
Delinquent account register	NA	65.7	71.1	77.8	78.6	76.2
Accounts-receivable reports	NA	62.3	72.9	79.4	79.0	78.1
Contracts-written reports	NA	39.3	47.4	54.8	56.2	51.6
Measurement of case acceptance	NA	NA	43.4	46.7	51.3	49.5

and pretreatment flow control system—were used by a higher percentage of respondents in 2005 than in 2003 (Table 4). Only written practice plans and patient satisfaction surveys (tied with 1999) were used by more orthodontists than ever before. Communications supervisors, progress reports, and post-treatment consultations were used by lower percentages of respondents than in any previous Study.

Computer Usage

Routine uses of in-office computers continued to become more widespread and varied (Table 5). Patient accounting/billing, practice analysis reports, and word processing/correspondence were routinely performed by computers in fewer practices than in 2003, but these were still computerized in about three-quarters or more of all offices. Other functions that were routinely computerized in more than half of the respondents' practices were appointment scheduling, patient recall, e-mail/Internet access, insurance forms, and payroll. While computers were still used by only about a third of the practices for treatment records, more than 40% used them for diagnostic imaging, cephalometric analysis, and maintenance of an office website.

Delegation

Delegation of tasks to staff members tailed off slightly since the 2003 Study, which recorded many all-time highs in routine delegation (Table 6). Only removal of residual adhesive, fabrication and insertion of bands, adjustment of removable appliances, and financial arrangements were routinely delegated by higher percentages of respondents in 2005 than in 2003; for all of these except removal of residual adhesive, the percentages were the highest ever. On the other hand, the percentage of practices routinely delegating cephalometric tracings was the lowest ever, perhaps because of the use of digital analyses.

TABLE 5
ROUTINE COMPUTER USAGE

	Year of Study					
	1981	**1987**	**1993**	**1999**	**2003**	**2005**
Patient accounting/billing	68.0%	74.1%	87.9%	92.2%	92.1%	91.1%
Patient recall	NA	52.0	71.7	82.3	77.6	81.6
Payroll/expense records	45.0	41.5	51.2	47.8	59.7	60.0
Inventory control	NA	NA	NA	11.7	15.2	16.5
Insurance forms	27.0	29.9	47.9	69.3	73.7	75.8
Appointment scheduling	14.0	22.1	46.0	71.1	80.2	83.7
Practice analysis reports	45.0	65.0	73.7	79.6	76.5	74.4
Word processing/correspondence	64.0	77.9	90.2	95.4	95.4	94.7
Treatment records	16.0	9.2	13.6	23.7	29.8	34.5
Cephalometric analysis	NA	NA	19.4	29.5	34.0	44.7
Diagnostic imaging/storage	11.0	9.2	9.8	38.3	43.4	48.5
Monitor treatment progress	18.0	9.2	13.1	17.0	19.6	22.0
Practice newsletter	NA	NA	8.9	11.7	11.4	13.6
E-mail/Internet	NA	NA	NA	42.5	71.6	76.7
Website service	NA	NA	NA	NA	33.3	41.9
Patient access to records	NA	NA	NA	NA	NA	14.0

Use of Practice-Building Methods

The only practice-building methods used by higher percentages of orthodontists than ever before were entertainment of patients and parents, Invisalign treatment (which has only been surveyed since 2003), extended payment period (surveyed since 2001), direct-mail promotion, and advertising in local newspapers (Table 7). A number of other methods were used more in 2005 than in 2003, however, including change practice location, open one or more Saturdays per month, participate in dental society activities, letters of appreciation and reports to GPs, seek referrals from other professionals, on-time case finishing, improve case presentation, improve

TABLE 6
ROUTINE DELEGATION

	Year of Study					
	1981	1987	1993	1999	2003	2005
Record-Taking						
Impressions for study models	59.2%	72.3%	80.8%	88.0%	91.0%	90.1%
X-rays	84.4	88.9	89.1	91.8	93.9	92.8
Cephalometric tracings	57.3	54.3	45.0	40.8	42.3	40.0
Clinical						
Impressions for appliances	47.3	62.6	66.7	72.3	80.0	79.3
Removal of residual adhesive	74.6	75.4	67.5	39.3	33.7	34.8
Fabrication of:						
Bands	37.5	45.6	53.4	53.7	54.2	55.3
Archwires	20.4	25.0	29.9	30.1	29.7	27.2
Removable appliances	46.1	43.0	42.1	45.0	47.0	42.9
Insertion of:						
Bands	7.0	12.0	14.3	18.9	24.5	26.6
Bonds	9.3	8.5	7.8	9.9	10.8	10.6
Archwires	26.2	34.6	43.2	47.7	58.6	53.8
Removable appliances	9.6	12.8	15.2	16.2	19.1	18.5
Adjustment of:						
Archwires	3.4	6.4	8.7	9.7	12.3	11.6
Removable appliances	2.3	4.5	5.1	7.6	7.3	8.1
Removal of:						
Bands	28.2	41.2	45.7	50.3	55.2	52.0
Bonds	24.8	40.3	42.6	48.7	53.3	48.9
Archwires	66.0	73.1	74.6	75.2	80.4	77.2
Administrative						
Case presentation	3.6	10.2	13.7	19.6	25.2	21.4
Fee presentation	15.9	24.0	39.9	60.8	71.0	70.6
Financial arrangements	50.3	61.0	70.9	80.0	84.2	86.8
Progress reports	9.0	17.7	18.2	21.9	27.9	24.1
Post-treatment conferences	3.9	12.5	11.9	16.0	18.4	15.2
Patient instruction and education	73.8	83.3	82.7	85.1	90.2	87.7

TABLE 7
USE OF PRACTICE-BUILDING METHODS

	Year of Study					
	1981	**1987**	**1993**	**1999**	**2003**	**2005**
Change practice location	20.1%	28.1%	31.9%	29.3%	26.3%	26.6%
Expand practice hours:						
Open one or more evenings/week	NA	24.0	31.5	24.8	16.8	13.8
Open one or more Saturdays/month	NA	21.4	22.4	16.7	10.5	11.8
Open a satellite office	39.9	45.2	41.9	36.4	32.3	29.6
Participate in community activities	61.5	57.3	60.1	56.2	54.8	52.7
Participate in dental society activities	67.0	63.1	62.6	57.0	53.4	55.9
Seek referrals from general dentists:						
Letters of appreciation	81.9	85.7	80.5	77.7	72.7	73.1
Entertainment	61.6	59.2	62.5	56.2	54.5	54.4
Gifts	45.2	65.4	64.2	68.2	69.4	67.8
Education of GPs	41.2	40.5	37.9	35.9	34.1	29.8
Reports to GPs	64.5	70.4	72.2	73.1	68.4	69.3
Seek referrals from patients and parents:						
Letters of appreciation	62.8	78.1	71.0	66.1	60.0	59.1
Follow-up calls after difficult appts.	NA	62.5	67.4	65.7	62.0	61.8
Entertainment	17.1	10.4	12.9	16.4	18.2	21.6
Gifts	16.3	22.0	25.3	32.6	39.4	35.0
Seek referrals from staff members	NA	52.1	51.1	49.3	49.9	49.3
Seek referrals from other professionals (non-dentists)	NA	32.6	32.0	23.1	26.0	27.8
Treat adult patients	51.0	91.0	84.5	85.9	83.0	78.8
Improve scheduling:						
On time for appointments	47.4	68.2	72.8	74.4	69.8	69.4
On-time case finishing	NA	57.8	60.1	63.3	60.4	60.8
Improve case presentation	44.4	42.9	48.6	53.1	46.4	47.3
Improve staff management	47.5	45.0	46.8	45.2	43.3	42.2
Improve patient education	27.7	37.0	40.3	45.1	40.1	44.6
Expand services:						
TMJ	NA	55.1	42.8	29.5	24.8	23.6
Functional appliances	NA	64.8	47.2	34.6	29.4	26.1
Lingual orthodontics	NA	32.4	15.6	11.0	9.6	6.4
Surgical orthodontics	NA	73.0	58.9	45.9	38.0	36.2
Invisalign treatment	NA	NA	NA	NA	52.0	56.2
Patient motivation techniques	NA	30.5	34.9	41.6	37.6	33.5
No-charge initial visit	42.6	56.4	65.9	68.7	75.8	74.4
No-charge diagnostic records	NA	NA	NA	NA	22.3	18.9
No initial payment	NA	NA	NA	NA	16.0	14.5
Extended payment period	NA	NA	NA	NA	31.0	35.7
Practice newsletter	NA	20.0	16.6	13.9	12.7	12.6
Personal publicity in local media	NA	14.2	12.3	14.9	13.8	14.3
Advertising:						
Telephone yellow pages	35.5	NA	NA	NA	NA	NA
Boldface listing	NA	38.9	49.4	47.9	59.2	54.6
Display listing	NA	10.3	16.2	21.0	27.3	23.4
Local newspapers	2.4	8.8	9.2	16.4	17.5	20.4
Local TV and/or radio	0.5	1.3	1.4	NA	NA	NA
TV	NA	NA	NA	3.0	5.3	3.9
Radio	NA	NA	NA	4.8	6.1	5.6
Direct-mail promotion	1.0	5.8	6.6	8.2	10.7	13.1
Managed care	NA	NA	NA	16.1	12.5	13.5
Affiliation with mgt. service organization	NA	NA	NA	7.7	4.7	1.7

TABLE 8
SOURCES OF REFERRALS

	% of Practices Using Source				Median % of Referrals (All Practices)			
	1983	1989	1997	2005	1983	1989	1997	2005
Other Dentists (GPs)	98.0	99.2	98.7	99.3	50.2	50.0	50.0	50.0
Other Dentists (specialists)	68.4	71.7	65.9	66.0	2.4	2.0	2.0	2.0
Patients	97.8	98.8	97.6	98.6	30.7	30.0	30.0	30.0
Personal Contacts	NA	66.6	65.5	63.6	NA	2.0	2.0	2.0
Transfers	NA	74.2	67.6	59.4	NA	1.0	1.0	1.0
Staff	54.0	51.5	51.2	50.8	0.8	1.0	1.0	1.0
Other Professionals	41.2	32.9	23.8	20.8	0.3	0.0	0.0	0.0
Dental Franchises	NA	0.7	1.5	1.1	NA	0.0	0.0	0.0
Dental Referral Service	3.8	2.9	2.3	0.7	0.0	0.0	0.0	0.0
Direct-Mail Advertising	1.2	2.6	3.6	8.6	0.0	0.0	0.0	0.0
Yellow Pages	47.2	45.8	43.8	43.5	0.4	0.0	0.0	0.0
Commercial Advertising	1.8	4.2	7.7	11.5	0.0	0.0	0.0	0.0
Drive-By Signage	NA	NA	NA	19.2	NA	NA	NA	0.0
Managed Care (Capitation/Closed Panel)	3.7	6.9	18.1	9.5	0.0	0.0	0.0	0.0

patient education, personal publicity in local media, and managed care.

Practice-building methods that have been included on the questionnaire since at least 1999, but were used by the lowest percentages of respondents ever, were open one or more evenings per week; open a satellite office; participate in community activities; entertainment and education of GPs; follow-up calls after difficult appointments; improve staff management; expand services with TMJ, functional appliances, lingual orthodontics, and surgical orthodontics; practice newsletter; and affiliation with a management service organization.

Sources of Referrals

In every Practice Study to date, GPs have accounted for a median of 50% of all referrals, patients for a median of 30%, and other sources for a median of 2% or fewer (Table 8). (The percentages do not add up to 100% because medians are reported instead of means.) General dentists were used as referral sources by virtually every respondent, but direct-mail advertising was the only other source used by a higher percentage of respondents than in any previous Study, with commercial advertising used by the same percentage as in 2003.

(TO BE CONTINUED)