

2005 JCO Orthodontic Practice Study

Part 4 Additional Breakdowns

ROBERT G. KEIM, DDS, EDD, PHD
EUGENE L. GOTTLIEB, DDS
ALLEN H. NELSON, PHD
DAVID S. VOGELS III

Over the past three months (JCO, November 2005-January 2006), this series of articles on the 2005 JCO Orthodontic Practice Study has described trends in orthodontic economics and practice administration since the first biennial survey was conducted in 1981. We have also discussed the management procedures that seem to be related to practice success and growth, and we have reported on employment patterns, staff salaries, and benefits. Part 4 of the series compares male and female orthodontists, as well as practices that were affiliated or unaffiliated with management service organizations. For more complete tabulations, click on the link from this article in the JCO Online Archive at www.jco-online.com.

Elsewhere in the Practice Study, we report median results, which are less influenced than means by extremely high and low responses. Many of the tables in this section, however, contain mean figures, which must be used for tests of statistical significance. We have chosen a significance level (“p”) of .01 instead of the conventional .05 because the large number of variables in the Study increases the possibility that the data may be affected by chance. Annual results, such as income and numbers of cases, refer to the calendar year preceding the Practice Study, which, in this case, was 2004. For the complete survey

methodology, see Part 1 (JCO, November 2005).

Breakdowns by Sex of Orthodontist

Since the first Practice Study in 1981, the percentage of female respondents has increased from .6% to 14.5%. In the present survey, nearly a third of the respondents who had been in practice for 6-10 years were female, and nearly a quarter of those in practice for 11-15 years. On the other hand, only 3.1% of the orthodontists who had been practicing for more than 25 years were female (Table 28). There were no female respondents from New England, but more than 25% of the West North Central orthodontists in the survey were women.

As in past Studies, there were significant differences between male and female respondents in numbers of cases, probably because the women had been in practice for an average seven and a half years less than the men (Table 29). For the first time, however, there were no significant differences in income. As in the 2003 Study, male orthodontists reported slightly higher percentages of adult and third-party patients, worked a few more hours, and attended more courses and meetings.

Differences between male and female respondents in the use of management and prac-

Dr. Keim is Editor, Dr. Gottlieb is Senior Editor, and Mr. Vogels is Managing Editor of the *Journal of Clinical Orthodontics*, 1828 Pearl St., Boulder, CO 80302. Dr. Nelson is Director and Research Consultant, Nelson Associates, Nederland, CO.



Dr. Keim



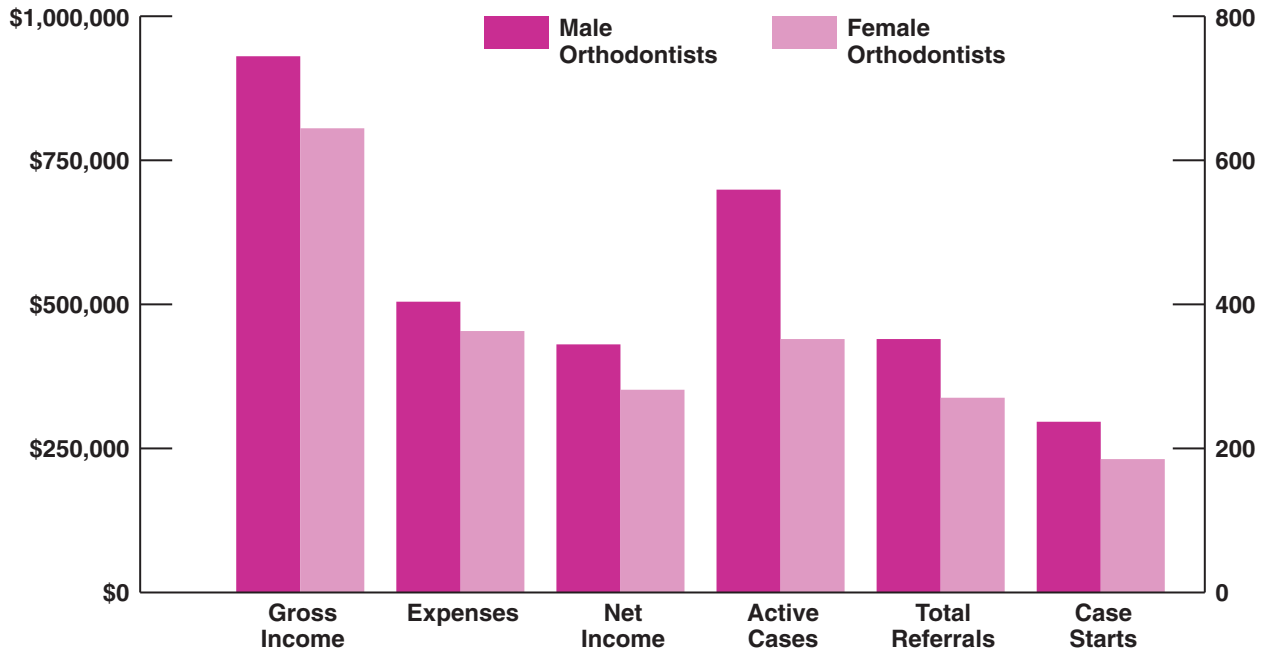
Dr. Gottlieb



Dr. Nelson



Mr. Vogels



**TABLE 28
SEX OF ORTHODONTIST BY
DEMOGRAPHIC VARIABLES**

	Male	Female
<i>Years in Orthodontic Practice</i>		
2-5 years	83.0%	17.0%
6-10 years	68.5	31.5
11-15 years	75.6	24.4
16-20 years	84.9	15.1
21-25 years	85.5	14.5
26 or more years	96.9	3.1
<i>Geographic Region</i>		
New England	100.0	0.0
Middle Atlantic	80.9	19.1
South Atlantic	82.8	17.2
East South Central	93.8	6.3
East North Central	85.1	14.9
West North Central	74.1	25.9
Mountain	93.3	6.7
West South Central	86.8	13.2
Pacific	85.2	14.8

tice-building methods and in routine delegation to staff members have become less clear as the percentage of women orthodontists has grown. Of the management methods surveyed, however, female respondents were more likely than male respondents to use all except written practice objectives, office policy manual, measurement of staff productivity, dental management consultant, patient satisfaction surveys, communications supervisor, progress reports, profit and loss statements, delinquent accounts register, accounts-receivable and contracts-written reports, and measurement of case acceptance (Table 30).

Of the staff duties listed, women orthodontists were more likely than men to routinely delegate x-rays; fabrication of bands, archwires, and removable appliances; insertion of bands, bonds, and removable appliances; adjustment of removable appliances; fee presentation; financial arrangements; and progress reports (Table 31).

Of the practice-building methods on the questionnaire, female respondents were more likely than male respondents to open one or more

evenings per week; participate in community activities; present gifts to GPs and to patients and parents; seek referrals from staff members; improve staff management and patient education; perform Invisalign treatment; use patient motivation techniques, no-charge initial visits, practice newsletters, and personal publicity in local media; and advertise by yellow pages boldface listings and local newspapers and TV (Table 32).

Management Service Organizations

The percentage of respondents affiliated with management service organizations has dropped from 9.8% in the 1999 Practice Study to 3.3% in the present survey. There were no MSO affiliates who had been in practice for 6-10 years, but otherwise the affiliates were fairly evenly divided among the practice age groups (Table

**TABLE 29
SELECTED VARIABLES (MEANS) BY SEX OF ORTHODONTIST**

	Male	Female
Number of Years in Practice	21.3	13.8*
Number of Satellite Offices	0.6	0.3*
Full-Time Employees	5.4	4.3
Part-Time Employees	1.7	2.0
Total Referrals	348.9	268.7
Case Starts	236.6	185.7*
Adult Case Starts	22.4%	20.1%
Active Treatment Cases	561.0	349.2*
Adult Active Cases	22.0%	19.9%
Patients Covered by Third Party	47.7%	44.7%
Patients Covered by Managed Care	3.8%	2.8%
Offer Third-Party Financing (such as Orthodontists Fee Plan)	67.8%	76.1%
Total Chairs	6.8	6.6
Patients per Day	52.0	44.8
Emergencies per Day	2.9	2.3
Broken Appointments per Day	3.4	2.8
Cancellations per Day	2.9	2.3
Gross Income	\$931,295	\$804,470
Overhead Rate	54%	58%
Net Income	\$430,062	\$348,998
Net Income per Case	\$811	\$1,136
Child Case Fee	\$4,709	\$4,646
Full-Time Employee Hours/Week	34.2	34.8
Full-Time Employee Weeks/Year	48.2	48.0
Orthodontist-Owner Hours/Week	36.7	35.2
2004 Continuing Education Course Days	7.0	5.7
2004 Continuing Education Meeting Days	5.5	4.8

*Differences between these groups are statistically significant at or below the .01 probability level.

33). The Middle Atlantic, East South Central, and West North Central regions had no MSO respondents; the highest percentage was in the Pacific region.

With so few MSO practices to subdivide,

we elected to report only the most important variables by affiliation status (Table 34). As in previous surveys, MSO affiliates tended to be larger than unaffiliated practices. The differences between them were statistically significant, how-

**TABLE 30
USE OF MANAGEMENT METHODS BY SEX OF ORTHODONTIST**

	Male	Female
Written philosophy of practice	50.7%	51.4%
Written practice objectives	30.5	27.8
Written practice plan	22.7	23.6
Written practice budget	17.2	19.4
Office policy manual	77.6	75.0
Office procedure manual	53.7	54.2
Written job descriptions	59.4	61.1
Written staff training program	28.8	29.2
Staff meetings	79.1	87.5
Individual performance appraisals	61.3	75.0
Measurement of staff productivity	16.7	15.3
In-depth analysis of practice activity	31.3	31.9
Practice promotion plan	32.8	34.7
Dental management consultant	18.7	15.3
Patient satisfaction surveys	30.0	23.6
Employee with primary responsibility as communications supervisor	23.6	22.2
Progress reports	37.9	33.3
Post-treatment consultations	31.3	33.3
Pretreatment flow control system	44.1	45.8
Treatment flow control system	22.9	29.2
Cases beyond estimate report	29.8	34.7
Profit and loss statements	71.4	63.9
Delinquent account register	77.6	68.1
Accounts-receivable reports	79.1	72.2
Contracts-written reports	53.7	40.3
Measurement of case acceptance	50.2	44.4

ever, only for numbers of satellite offices, case starts, and active cases; percentages of adult case starts; daily numbers of patients, emergencies, broken appointments, and cancellations; and an-

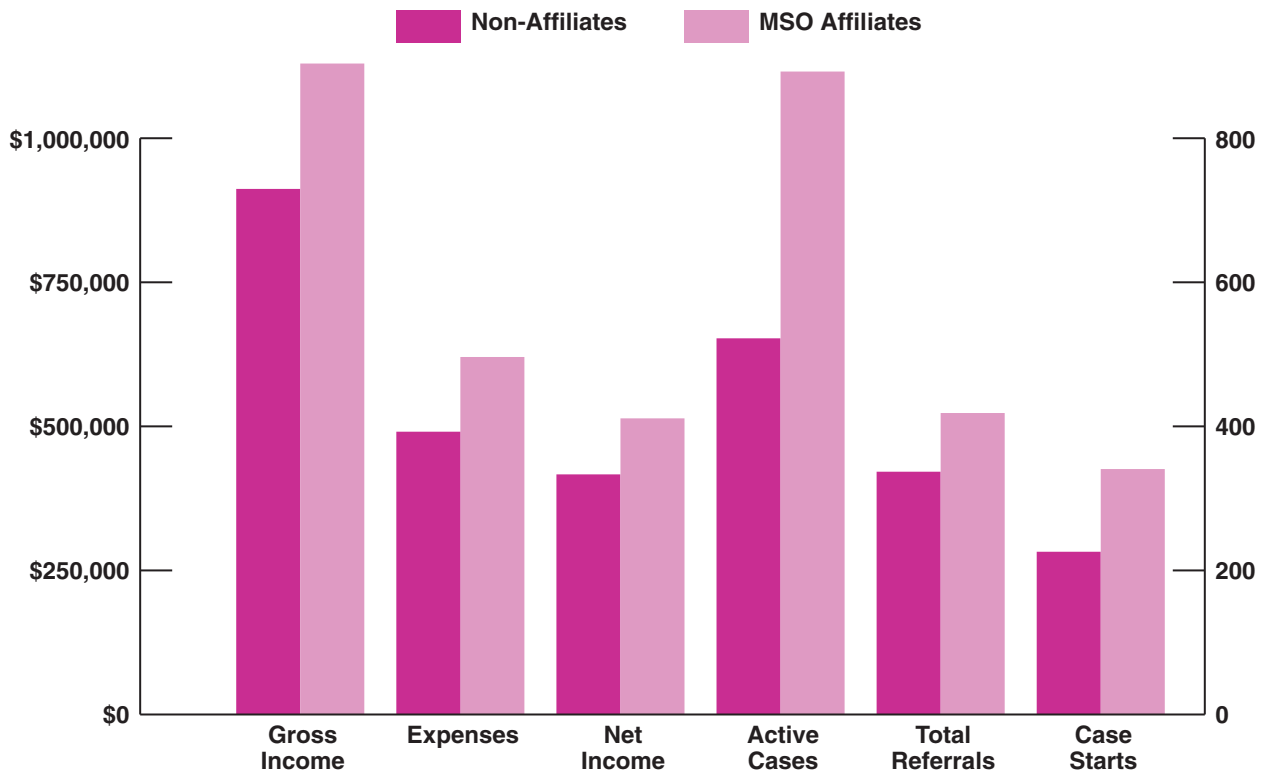
nual numbers of continuing education days. The non-affiliates were more likely to offer third-party financing, and they reported higher fees and more net income per case.

**TABLE 31
ROUTINE DELEGATION BY SEX OF ORTHODONTIST**

	Male	Female
<i>Record-Taking</i>		
Impressions for study models	90.2%	88.7%
X-rays	92.5	94.2
Cephalometric tracings	40.7	34.8
<i>Clinical</i>		
Impressions for appliances	79.9	74.6
Removal of residual adhesive	36.0	26.8
Fabrication of:		
Bands	54.9	56.1
Archwires	27.1	27.3
Removable appliances	41.2	51.5
Insertion of:		
Bands	25.8	30.4
Bonds	10.2	13.0
Archwires	54.5	49.3
Removable appliances	18.0	20.9
Adjustment of:		
Archwires	11.7	11.6
Removable appliances	7.6	11.6
Removal of:		
Bands	51.9	50.0
Bonds	49.9	40.8
Archwires	78.4	69.0
<i>Administrative</i>		
Case presentation	22.0	18.8
Fee presentation	69.3	77.1
Financial arrangements	86.7	87.3
Progress reports	23.5	26.9
Post-treatment conferences	16.4	7.0
Patient instruction and education	88.0	85.9

TABLE 32
USE OF PRACTICE-BUILDING METHODS BY SEX OF ORTHODONTIST

	Male	Female
Change practice location	27.0%	25.0%
Expand practice hours:		
Open one or more evenings/week	13.0	18.3
Open one or more Saturdays/month	12.2	10.0
Open a satellite office	31.3	18.3
Participate in community activities	51.9	56.7
Participate in dental society activities	55.9	55.0
Seek referrals from general dentists:		
Letters of appreciation	73.6	71.7
Entertainment	55.9	46.7
Gifts	67.0	73.3
Education of GPs	30.4	26.7
Reports to GPs	69.6	68.3
Seek referrals from patients and parents:		
Letters of appreciation	59.1	58.3
Follow-up calls after difficult appointments	61.7	61.7
Entertainment	21.7	21.7
Gifts	33.6	43.3
Seek referrals from staff members	49.0	51.7
Seek referrals from other professionals (non-dentists)	29.0	21.7
Treat adult patients	79.4	76.7
Improve scheduling:		
On time for appointments	69.6	68.3
On-time case finishing	61.2	60.0
Improve case presentation	47.2	46.7
Improve staff management	41.4	45.0
Improve patient education	44.1	48.3
Expand services:		
TMJ	24.3	20.0
Functional appliances	26.7	21.7
Lingual orthodontics	6.7	5.0
Surgical orthodontics	37.1	30.0
Invisalign	55.9	56.7
Patient motivation techniques	30.7	48.3
No charge initial visit	73.0	81.7
No charge diagnostic records	20.3	10.0
No initial payment	15.1	11.7
Extended payment period	37.7	25.0
Practice newsletter	11.6	18.3
Personal publicity in local media	14.2	15.0
Advertising:		
Telephone yellow pages		
Boldface listing	54.5	55.0
Display advertising	23.8	20.0
Local newspapers	19.7	25.0
Local TV	3.8	5.0
Local radio	6.4	1.7
Direct-mail promotion	13.9	8.3
Managed care (closed-panel contracting)	13.9	11.7
Management service affiliation	2.0	0.0



**TABLE 33
MANAGEMENT SERVICE AFFILIATION
BY DEMOGRAPHIC VARIABLES**

	Not Affiliated	Affiliated
<i>Years in Orthodontic Practice</i>		
2-5 years	95.7%	4.3%
6-10 years	100.0	0.0
11-15 years	94.9	5.1
16-20 years	98.8	1.2
21-25 years	98.3	1.7
26 or more years	95.5	4.5
<i>Geographic Region</i>		
New England	96.0	4.0
Middle Atlantic	100.0	0.0
South Atlantic	96.7	3.3
East South Central	100.0	0.0
East North Central	98.5	1.5
West North Central	100.0	0.0
Mountain	95.2	4.8
West South Central	98.0	2.0
Pacific	93.0	7.0

On average, the MSO affiliates were more positive about the effects of their organizations than in previous Studies (Table 35). A majority were highly positive or somewhat positive about the effects of affiliation on case acceptance, practice efficiency, and gross income. On the other hand, a plurality thought the MSOs had shown no effect on their referrals.

Conclusion

Results of the 2005 JCO Orthodontic Practice Study continued to reflect the stagnant orthodontic economy that has been seen since about 2000. Median gross income remained unchanged for the first time since these surveys began in 1981, and case starts declined for the second consecutive survey (see Part 1, JCO, November 2005). The overall percentage of orthodontists who reported being “not busy enough” was the highest since the 1997 Study (Table 36). Practices grew at the lowest rate since the 1989 Study, while respondents were about as pessimistic about future growth as they were two years ago

**TABLE 34
SELECTED VARIABLES (MEANS) BY
MANAGEMENT SERVICE AFFILIATION**

	Not Affiliated	Affiliated
Number of Years in Practice	20.0	21.3
Number of Satellite Offices	0.6	1.3*
Full-Time Employees	5.2	6.9
Part-Time Employees	1.8	1.9
Total Referrals	336.6	419.1
Case Starts	226.0	341.5*
Adult Case Starts	26.4%	48.1%*
Active Treatment Cases	523.6	894.4*
Adult Active Cases	21.6%	28.7%
Patients Covered by Third Party	47.3%	47.6%
Patients Covered by Managed Care	3.5%	6.8%
Offer Third-Party Financing (such as Orthodontists Fee Plan)	69.3%	68.8%
Total Chairs	6.8	9.0
Patients per Day	50.5	68.2*
Emergencies per Day	2.7	5.1*
Broken Appointments per Day	3.2	6.2*
Cancellations per Day	2.7	4.4*
Gross Income	\$909,932	\$1,132,707
Overhead Rate	54%	57%
Net Income	\$418,074	\$513,571
Net Income per Case	\$858	\$547
Child Case Fee	\$4,718	\$4,479
Full-Time Employee Hours/Week	34.2	33.9
Full-Time Employee Weeks/Year	48.1	48.1
Orthodontist-Owner Hours/Week	36.3	39.9
2004 Continuing Education Course Days	6.7	17.3*
2004 Continuing Education Meeting Days	4.8	12.6*

*Differences between these groups are statistically significant at or below the .01 probability level.

**TABLE 35
EFFECTS OF MANAGEMENT SERVICE AFFILIATION**

	Highly Positive	Somewhat Positive	None	Somewhat Negative	Highly Negative	Mean*
Referrals	31.3%	25.0%	43.8%	0.0%	0.0%	2.12
Case Acceptance	18.8	31.3	37.5	12.5	0.0	2.44
Gross Income	11.8	64.7	17.6	0.0	5.9	2.24
Practice Efficiency	16.7	50.0	22.2	0.0	11.1	2.39

*1 = highly positive; 2 = somewhat positive; 3 = none; 4 = somewhat negative; 5 = highly negative.

(see Part 3, JCO, January 2006).

On the other hand, practices that used certain management methods and routinely delegated duties to staff members continued to demonstrate higher levels of net income than others did (see Part 2, JCO, December 2005). These high-income practices, representing about one-quarter

of the Practice Study respondents, showed the potential that exists to perform more efficiently, with significantly lower overhead rates and higher net income per case. If more orthodontists follow their examples and the national economy continues to improve, the 2007 Practice Study may paint a brighter picture. □

**TABLE 36
PRACTICE BUSYNESS BY SELECTED VARIABLES**

	Too Busy to Treat All Persons Requesting Appointments	Provided Care to All Who Requested Appointments But Felt Overworked	Provided Care to All Who Requested Appointments —Did Not Feel Overworked	Not Busy Enough
<i>Years in Orthodontic Practice</i>				
2-5 years	0.0%	13.3%	53.3%	33.3%
6-10 years	3.8	19.2	51.9	25.0
11-15 years	2.6	20.8	50.6	26.0
16-20 years	1.2	23.8	58.3	16.7
21-25 years	3.4	10.2	64.4	22.0
26 or more years	1.3	14.0	61.1	23.6
<i>Legal Status</i>				
Sole proprietorship	3.8	18.9	52.4	24.9
Professional corporation	0.7	15.3	60.5	23.5
<i>Community Size</i>				
Rural (less than 20,000)	5.9	7.4	61.8	25.0
Small city (20,000-50,000)	2.3	19.8	60.3	17.6
Large city (50,000-500,000)	0.6	16.3	52.9	30.2
Metropolitan (more than 500,000)	0.9	19.8	56.8	22.5
<i>Geographic Region</i>				
New England	4.0	20.0	44.0	32.0
Middle Atlantic	1.5	27.7	53.8	16.9
South Atlantic	1.1	10.1	55.1	33.7
East South Central	0.0	18.8	68.8	12.5
East North Central	3.1	21.9	54.7	20.3
West North Central	0.0	16.0	60.0	24.0
Mountain	0.0	14.0	53.5	32.6
West South Central	4.0	12.0	64.0	20.0
Pacific	1.2	16.7	59.5	22.6
COMPOSITE	1.8	17.2	56.9	24.0