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# 2023 JCO Orthodontic Practice Study

## Part 1 Trends

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In this three-part series, we present the key results of the 2023 JCO Orthodontic Practice Study. Part 1 covers important trends in orthodontic economics and practice administration since our first Study in 1981, with an emphasis on differences between this survey and the preceding 2021 Study. In the following two articles, we will outline specific methods that appear to be related to practice success and practice growth, respectively.

See the box on the next page for the methodology used in this Practice Study. The complete tables and questionnaire, as well as the data from all previous surveys, will be available to any JCO subscriber in our Online Archive at [www.jco-online.com](http://www.jco-online.com).

### Practice Activity

The main story of the 2021 Practice Study was the effect of COVID-19 shutdowns and slow-downs. Despite the reported decline in orthodontic economics, however, we found that practitioners



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## METHODOLOGY AND LIMITATIONS

The 2023 JCO Orthodontic Practice Study is the 22nd biennial survey conducted by JCO since 1981 and the sixth to be administered primarily online, using SurveyMonkey.com. Based on responses to the 2021 Study and input from JCO editors, we adjusted several items in the questionnaire, while eliminating the section on the COVID-19 pandemic. Several leading U.S. practice-management software developers provided assistance to their customers in completing the questionnaire, as they have done since the 2015 Study. Dolphin offered a customized report to generate data for the practice-activity section; Cloud9, Ortho2, and Tops Ortho supplied detailed instructions for obtaining the required data from their programs.

JCO sent an e-mail with a link to the online survey to its database of 5,521 practicing U.S. orthodontists on Feb. 16, 2023; Cloud9, Dolphin, Ortho2, and Tops Ortho each sent two similar e-mails to their users. U.S. subscribers to JCO received a paper questionnaire in the March 2023 issue, and notices were published in both the printed journal and the JCO website. Reminder e-mails were sent to the JCO database of U.S. orthodontists on March 30, May 23, and June 20, 2023.

A total of 183 orthodontists completed the survey anonymously, for an overall response rate of 3% of the orthodontists who had initially received e-mails from JCO. (It is not possible to calculate an exact response rate because the number of practice-management software clients who received e-mails is unknown, and there was probably some overlap among all the e-mail lists.) All the response data were tabulated on spreadsheets for analysis using R statistical software (Institute for Statistics and Mathematics, Vienna).

Every Practice Study to date has been intended to reflect only full-time, solo U.S. orthodontic practices. Therefore, any respondent with less than two years in practice, a main office in a different country, more than one orthodontist-owner, or gross income of less than \$60,000 *and* fewer than 50 case starts in 2022 was excluded from the overall analysis. Practitioners who filled out only the first page of the questionnaire (basic demographic information) were also excluded. After

these exclusions, there were 116 usable responses. Answers to specific items that were outside the range of possibility were also excluded.

For purposes of space, the tables on trends generally display only the results from the initial 1981 Practice Study and four subsequent studies at 10-year intervals, as well as the current 2023 Study. Complete tables from the intervening studies can be found in the Online Archive at [www.jco-online.com](http://www.jco-online.com), but the overall trends have been consistent. Practice data derived from a calendar year, such as income or numbers of cases, always refer to the year immediately preceding that survey (in the current report, 2022). Boldface type is used to highlight noteworthy results in rows or columns of the tables.

Most tables report the median (the middle response when all responses are sorted from highest to lowest) instead of the mean (the arithmetic average), as in every previous Practice Study, because the median is less likely to be influenced by extremely high or low responses. It should be noted that a column of median percentages will not necessarily add up to 100%, unlike a column of mean percentages.

As in all studies to date, the level of statistical significance has been set at  $p < .01$  rather than the more customary .05, because the high number of variables in the questionnaire increases the possibility that the results could be affected by chance. It should again be emphasized that statistical significance does not establish a causal relationship; for example, if practitioners who use a certain management method report significantly higher net income than those who do not use the method, it does not prove that the management method produced the higher income.

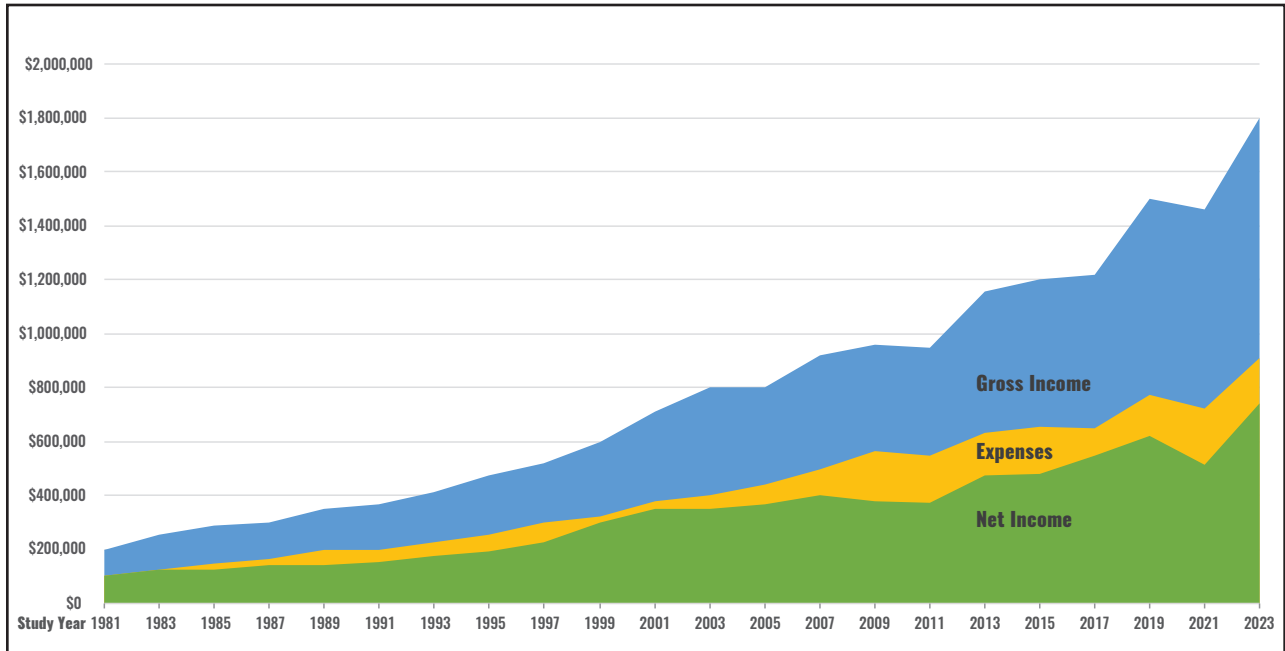
The accuracy of individual responses to the JCO Orthodontic Practice Study cannot be guaranteed, particularly because the questionnaire is filled out anonymously. Nevertheless, we believe the consistency of results and trends since 1981 continues to support their reliability as a reflection of orthodontic economics and practice administration in the United States.

**TABLE 1  
PRACTICE ACTIVITY (MEDIANS)**

	Year of Study*					
	1981	1991	2001	2011	2021	2023
Age	42	46	49	54	48	49
Years in Practice	12	16	18	23	17	20
Gross Income	\$200,003	\$367,045	\$713,000	\$950,000	\$1,461,321	\$1,800,000
Expenses	\$100,003	\$200,000	\$380,000	\$550,000	\$725,000	\$910,000
Net Income	\$102,000	\$153,700	\$350,000	\$374,000	\$512,500	\$741,771
Net Income per Case	NA	NA	NA	NA	\$1,226	\$1,041
Overhead Rate	49%	56%	52%	59%	58%	56%
Estimated Increase in Supplier Costs	NA	NA	NA	NA	NA	10%
Case Starts	150	150	219	200	320	334
Adult Case Starts	15%	21%	20%	20%	27%	35%
Active Treatment Cases	300	350	488	450	582	700
Adult Active Cases	15%	18%	17%	18%	30%	31%
Patients on Observation	NA	NA	NA	NA	200	243
New-Patient Consultations	NA	225	322	303	440	471
Orthodontist-Owner Hours/Week	NA	NA	35	36	35	40
Child Fee (permanent dentition)	\$1,900	\$3,000	\$4,150	\$5,228	\$5,750	\$6,000
Adult Fee	\$2,100	\$3,300	\$4,480	\$5,626	\$6,200	\$6,480
Adult/Child Fee Increment	NA	NA	NA	NA	7%	7%
Initial Payment	25%	25%	25%	20%	15%	14%
Payment Period (months)	24	24	24	22	22	24
Patients Routinely Billed	31%	37%	50%	51%	62%	62%
Patients per Day	38	40	50	45	43	50**
Percentage of Total Patients per Day	NA	NA	NA	NA	11%	6%
Patients Covered by Third Party	35%	45%	40%	40%	46%	60%
Accept Assignment of Benefits	38%	63%	79%	80%	85%	82%
Offer Third-Party Financing Plan	NA	NA	NA	66%	37%	44%
Fee Presented Before Records Taken	NA	54%	71%	71%	52%	46%

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

\*\*Beginning in 2017, this figure was calculated by dividing each respondent's total number of active cases by the number of days seeing patients. In previous studies, the respondent supplied the number of patients per day.



**Fig. 1 Trends in median gross income, expenses, and net income since initial JCO Orthodontic Practice Study in 1981.**

were optimistic about their ability to recover from the pandemic in 2021 and 2022. The present survey validates that optimism.

Bouncing back from calendar year 2020, nearly all categories of practice activity reached all-time highs in 2022 (Table 1). Compared with the 2019 Study—which recorded a substantial increase over 2017—median gross income was up by 20%, median expenses by 18%, and median net income by 19% (Fig. 1). In addition, the median overhead rate returned to the 2019 figure of 56%. A question on estimated supplier costs, included for the first time, indicated a 10% increase over the past two years. While this figure cannot be compared with previous studies, the overall U.S. inflation rate over that period was 13.5%.

Median active cases and case starts also reached their highest levels since the first Practice Study in 1981. Active cases increased by 20%, but case starts by only 4%, compared with the 2021 survey. New-patient consultations were up 7% over 2021, but still slightly below the 487 reported in the 2019 Study. Percentages of adult patients continued to reach record highs, with adults now ac-

counting for more than a third of all case starts.

Although median child and adult fees have not increased substantially since 2015 on a biennial basis, both rose by about 4% over the past two years. The median initial fee payment continued to drop, reaching a low point of 14%, but the median payment period returned to its long-time level of 24 months. The percentage of practices routinely billing patients remained at 62%, well below the 2019 high of 75%.

Acceptance of assignment of benefits dropped slightly to 82%, but this figure has not varied substantially since the 2009 Study. The median percentage of patients covered by third parties jumped to 60%, an all-time high. Although only 44% of the practices offered third-party financing plans, that was above the 2021 low of 37%. Less than half of the respondents said they presented a fee before records were taken—the lowest percentage since this question was first asked in 1985.

The median number of hours worked by orthodontist-owners reached 40 for the first time, perhaps reflecting a catch-up to the pandemic

**TABLE 2  
PRACTICE ACTIVITY (MEDIAN) BY YEARS IN PRACTICE**

	2-7	8-13	14-20	21-30	31 or more
<b>Gross Income</b>	\$902,500	\$2,071,174	\$3,055,027	\$1,644,439	\$1,729,709
<b>Expenses</b>	\$446,750	\$1,111,709	\$1,741,717	\$980,703	\$945,859
<b>Net Income</b>	\$432,000	\$835,776	\$1,313,310	\$711,699	\$781,121
Overhead Rate	52%	58%	60%	60%	58%
<b>Case Starts</b>	<b>319</b>	<b>388</b>	<b>647</b>	<b>306</b>	<b>294</b>
Active Cases	905	745	1,393	671	631
Child Fee	\$5,832	\$6,192	\$5,789	\$5,809	\$6,025
Adult Fee	\$6,040	\$6,490	\$6,376	\$6,342	\$6,787

**TABLE 3  
PRACTICE ACTIVITY (MEDIAN) BY GEOGRAPHIC REGION**

	Gross Income**	Net Income**	Overhead Rate	Case Starts	Child Fee
Northeast (CT, ME, MA, NH, NJ, NY, PA, RI, VT)	\$1,227,727	\$515,800	59%	319	\$6,251
South (AL, DC, DE, FL, GA, MD, MS, NC, PR, SC, TN, VA)	\$2,510,093	\$1,200,203	56%	536	\$5,981
Midwest (IL, IN, IA, KY, MI, MN, MO, OH, WV, WI)	\$1,895,317	\$911,620	56%	374	\$5,901
West Central (AZ, AR, CO, ID, KS, LA, MT, NE, NV, NM, ND, OK, SD, TX, UT, WY)	\$1,616,266	\$681,138	60%	329	\$5,874
Pacific (AK, CA, HI, OR, WA)	\$2,090,393	\$859,723	57%	306	\$5,721

\*\*Differences between one group and the remaining groups are statistically significant at or below the .01 probability level.

backlog. Not shown in the table, the median number of satellite offices remained at .7, while 49% of the respondents reported having at least one satellite office, just below the high recorded in the 2015 Study.

**Years in Practice**

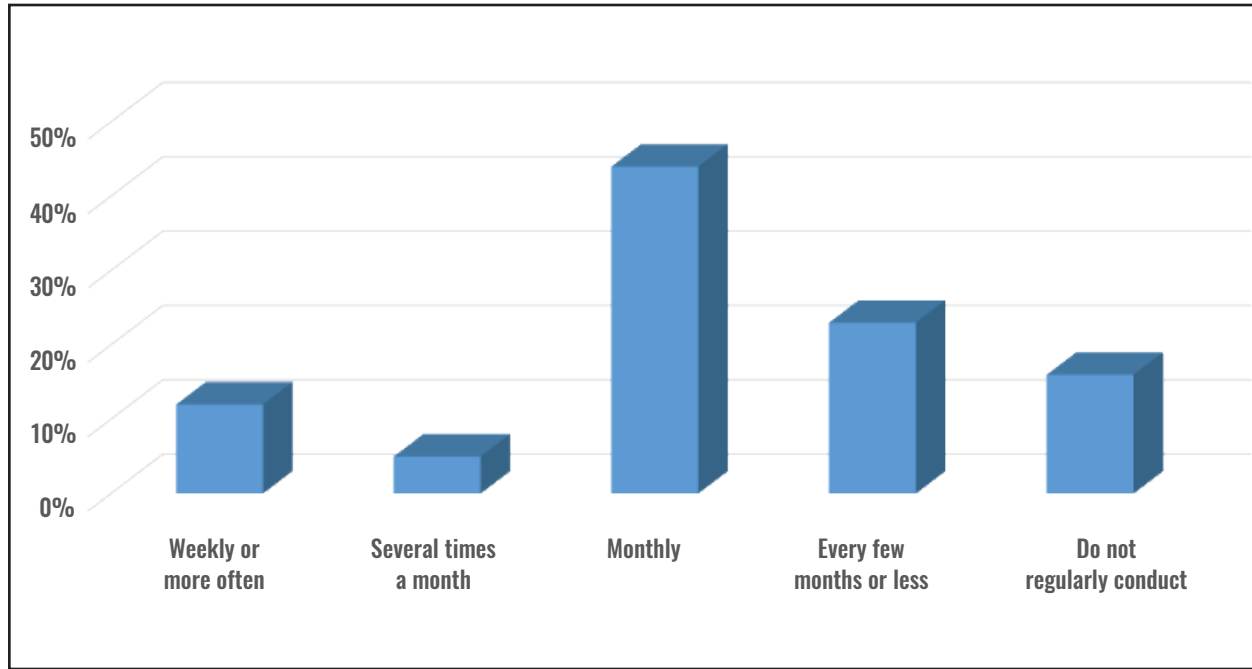
The median age and number of years in practice of respondents have remained fairly constant

since the 2013 Study, the first to be conducted primarily online. Because the categories of years in practice have been modified slightly in recent surveys to equalize the numbers in each group, they cannot be precisely compared from one Study to another. In the present survey, median income, expenses, and numbers of cases generally increased up to 14-20 years in practice and then declined (Table 2). The median overhead rate peaked at 60% between 14 and 30 years in practice.

**TABLE 4  
FEE POLICIES**

	Year of Study					
	1985*	1991	2001	2011	2021	2023
<b>Frequency of Fee Adjustment</b>						
Every 6 months	17%	12%	10%	4%	4%	3%
Every 12 months	43	49	56	36	40	47
Every 24 months	10	12	14	17	16	18
Every 36 months	1	1	2	5	3	7
Not regularly	30	26	18	39	37	24
<b>Services Not Included in Case Fee</b>						
Initial consultation	38	36	25	13	6	8
Diagnostic records	44	53	54	41	25	22
Phase I treatment	NA	NA	87	80	73	66
Extended treatment time	31	31	30	33	33	32
Broken appointment	NA	28	34	32	33	20
Occlusal equilibration	19	19	18	12	5	5
Skeletal anchorage	NA	NA	NA	54	67	52
Laser treatment	NA	NA	NA	48	50	38
Retention	16	15	11	9	4	7
Treatment of TMD	69	76	78	70	67	64
Repair of broken appliances	72	76	73	70	43	43
<b>Median Fee for Additional Service</b>						
Diagnostic records	NA	NA	NA	NA	\$300	\$415
Phase I treatment	NA	NA	NA	NA	2,900	3,067
Extended treatment time	NA	NA	NA	NA	155	213
Broken appointment	NA	NA	NA	NA	50	50
Skeletal anchorage	NA	NA	NA	NA	315	500
Laser treatment	NA	NA	NA	NA	398	440
Treatment of TMD	NA	NA	NA	NA	900	1,181
Repair of broken appliances	NA	NA	NA	NA	50	53

\*Question appeared for the first time in its current form in 1985.



**Fig. 2 Frequency of staff meetings.**

There were no statistically significant differences in child and adult fees by years in practice, but the highest fees were reported by those in practice for 8-13 or 31 or more years.

### Geographic Region

Since the 2013 Study, respondents have been divided into five geographic regions, instead of the nine regions of previous studies. In the present survey, there were statistically significant differences reported in median gross and net income between the Northeast and the remaining four regions (Table 3). While Northeast practices tended to be newer than those in the rest of the country, which would skew them toward lower income, it should be noted that the Northeast has reported consistently lower income than other regions since the first Practice Study in 1981. The highest gross income was recorded by practices in the South and Pacific regions, and the highest net income in the South and Midwest.

Northeast practices reported the highest me-

dian child case fees, and Pacific practices the lowest, but the differences were not statistically significant.

### Fee Policies

Compared with recent surveys, more respondents appeared to be adjusting their fees on a regular basis: the percentage changing fees every 12 months was the highest, and the percentage changing “not regularly” was the lowest, since the 2009 Study (Table 4). Since 2015, the questionnaire has also asked how practitioners determined their fee increases; in the current Study, the percentage tying their fees to the consumer inflation rate (49%) was the highest ever, while the percentage who said it was an arbitrary decision (35%) was the lowest.

Fewer respondents reported charging additional fees for most services than in the 2021 Study. For Phase I treatment, broken appointments, and TMD treatment, the percentages charging additional fees were the lowest ever. Although the median fees for extra services have been surveyed

**TABLE 5  
USE OF MANAGEMENT METHODS**

	Year of Study					
	1983	1991	2001	2011	2021	2023
Written philosophy of practice	27%	37%	48%	55%	61%	65%
Written practice objectives	20	27	33	31	32	36
Written practice plan	NA	16	20	20	25	25
Written practice budget	10	14	17	16	24	23
Office policy manual	53	65	74	82	81	82
Office procedure manual	45	47	56	54	54	57
Written job descriptions	37	48	57	57	55	69
Written staff training program	NA	25	31	31	34	41
Staff meetings	66	79	83	85	81	85
Individual performance appraisals	38	55	64	58	55	55
Measurement of staff productivity	NA	13	18	15	28	30
In-depth analysis of practice activity	30	30	31	30	37	38
Practice promotion plan	18	28	32	31	29	27
Dental management consultant	16	18	18	18	18	26
Patient satisfaction surveys	19	25	27	38	28	30
Employee with primary responsibility as communications supervisor	NA	27	25	26	29	23
Progress reports	38	47	41	35	29	29
Post-treatment consultations	35	39	34	33	19	28
Pretreatment flow control system	47	52	46	49	54	57
Treatment flow control system	21	22	24	29	29	35
Cases beyond estimate report	NA	22	27	35	41	49
Profit and loss statement	65	67	74	76	81	77
Delinquent account register	57	69	75	81	67	76
Monthly accounts-receivable reports	51	69	80	82	80	84
Monthly contracts-written reports	32	42	54	53	54	68
Measurement of case acceptance	NA	37	48	53	60	65
Third-party online marketing/ social media	NA	NA	NA	NA	30	43



**TABLE 6**  
**ROUTINE COMPUTER USAGE BY SELECTED VARIABLES**

	Year of Study					
	1981	1991	2001	2011	2021	2023
Inventory control	NA	NA	15%	18%	20%	23%
Patient recall	NA	64%	80	85	88	84
Treatment records	16%	11	26	61	76	82
Monitoring treatment progress	18	12	17	39	59	67
Patient access to account and schedule	NA	NA	NA	43	19	24
Patient access to own records	NA	NA	NA	23	13	11
Remote access by orthodontist and staff	NA	NA	NA	46	74	74
Text messaging	NA	NA	NA	NA	92	93
Mobile application	NA	NA	NA	NA	34	30

only since 2015, the present Study recorded the highest fees in every category except TMD treatment, which was higher in 2017.

### Management Methods

Most of the management methods listed on the questionnaire showed some increase in usage since the 2021 Study, though not to the level of the highs reported in 2013 (Table 5). Use of individual performance appraisals was the lowest since the 1995 Study, use of a practice promotion plan was the lowest since 1987, and use of an employee with primary responsibility as communications supervisor was the lowest since 1985. The only other methods that declined in usage since 2021 were written practice budget and profit and loss statement. When asked about the frequency of their staff meetings, a plurality of respondents replied that they held monthly meetings, while 16% did not hold regular staff meetings (Fig. 2).

Routine computer usage was similar to that reported in the previous two surveys (Table 6). The percentage of practices offering patients access to their own records reached a low of 11%; on the

other hand, text messaging reached a high of 93%.

### Delegation

Routine delegation of various tasks generally increased over the 2021 Study, after a brief decline attributed to COVID-19 slowdowns (Table 7). Delegation of appliance bonding and insertion, archwire changes, and progress reports hit all-time highs. The only tasks routinely delegated by fewer respondents in 2023 than in 2021 were appliance removal and patient instruction and education. A task newly listed on the questionnaire, follow-up communication with prospective patients, was routinely delegated by 88% of the practitioners.

The “delegation score”—a computed average of delegation responses (0 = never, 1 = occasionally, 2 = routinely)—rose slightly to 1.3, compared with 1.2 in the past three studies.

### Practice-Building Methods

This is the fourth Study in which practice-building methods have been grouped by category on the questionnaire, and respondents have indicated

**TABLE 7  
ROUTINE DELEGATION**

	Year of Study					
	1981	1991	2001	2011	2021	2023
<b>Record-Taking</b>						
Impressions for study models	59%	75%	88%	93%	91%	95%
Diagnostic records*	84	88	95	95	94	99
Cephalometric tracings	57	44	43	39	25	27
<b>Clinical</b>						
Appliance fitting**	20	26	33	32	48	51
Appliance bonding***	9	6	11	15	12	25
Archwire changes†	26	38	51	57	77	89
Appliance insertion‡	10	12	20	26	32	45
Appliance adjustment††	3	6	11	14	7	12
Appliance removal‡‡	25	37	52	60	55	53
Removal of residual adhesive	75	67	37	38	28	31
<b>Administrative</b>						
Case presentation	4	11	23	24	16	19
Fee presentation	16	37	63	75	85	90
Financial arrangements	50	68	83	87	91	96
Follow-up communication with prospective patients	NA	NA	NA	NA	NA	88
Progress reports	9	17	23	29	28	39
Post-treatment conferences	4	11	14	17	15	20
Patient instruction and education	74	83	87	89	89	88

\*Listed in 2015 and prior studies as "X-rays."

\*\*Listed in 2011 and prior studies as "Fabrication of archwires."

\*\*\*Listed in 2011 and prior studies as "Insertion of bonds."

†Listed in 2011 and prior studies as "Insertion of archwires."

‡Listed in 2011 and prior studies as "Insertion of removable appliances."

††Listed in 2011 and prior studies as "Adjustment of archwires."

‡‡Listed in 2011 and prior studies as "Removal of bonds."

whether they currently used the method, had used it in the past but stopped, or had never used it. Before that, the survey asked whether respondents had started or stopped using the method within the previous two years. The tables have displayed only

current users of each method, not including those who said they had used it in the past.

Under the category of expanded services, changing practice location was rated as the most effective technique, followed by opening a satellite

**TABLE 8A  
USE OF PRACTICE-BUILDING METHODS: EXPANDED SERVICES**

	1981	1991	2001	2011	2021	2023	
						Used	Effectiveness*
Change practice location	20%	31%	27%	27%	28%	32%	3.6
Expand practice hours**	16	25	18	16	28	14	2.2
Open a satellite office	40	44	32	27	41	44	3.0
<b>Expand Services</b>							
TMD	NA	47	27	25	39	35	1.9
Lingual orthodontics	NA	19	12	12	19	5	1.4
Surgical orthodontics	NA	60	44	37	86	78	2.3
Cosmetic/laser treatment	NA	NA	NA	22	31	35	2.4
Managed care	NA	NA	13	19	31	33	2.3
Affiliation with management service organization	NA	NA	5	2	1	4	NA

\*4 = excellent; 3 = good; 2 = fair; 1 = poor.

\*\*1989-2011 studies differentiated between evening hours and Saturday hours; figures shown here are for evening hours, which were reported by higher percentages of respondents.

office (Table 8A). Expanded practice hours were used by many fewer respondents and rated lower than in 2021. Surgical-orthodontic treatment was the service offered by the most practitioners, although by fewer than in 2021. Lingual treatment was offered by only 5% of respondents, an all-time low; moreover, 29% said they had stopped using lingual appliances—the highest percentage since the questionnaire was changed in 2017. Similarly, higher percentages had stopped offering TMD treatment (22%) and managed care (14%) than in any Study since 2017.

In the other practice-building categories surveyed, the respondents who had used each method were asked to rank its effectiveness in terms of improving profits, compared with the other methods in the same category. Among advertising methods, Google Ads (new to the questionnaire) and online advertising were not only the most used, but were considered the most ef-

fective (Table 8B). Yellow pages and direct-mail advertising were used by fewer respondents than ever before. Percentages of orthodontists who had used the method in the past but had stopped were 23% for Google, 24% for other online advertising, 45% for direct mail, 20% for local TV or radio, 37% for local newspapers, and 51% for yellow pages. All these except Google and yellow pages marked the highest levels since the question was first asked in 2017.

Although usage of Facebook has declined in every Study since 2019, it remained the highest-rated external-marketing method (Table 8C). Instagram and TikTok reached all-time highs in usage, and TikTok made a substantial jump in perceived effectiveness, from eighth to a tie for third. Among other methods, 30% of respondents said they had stopped using a practice newsletter, and 14% had stopped soliciting publicity in local media.

**TABLE 8B  
USE OF PRACTICE-BUILDING METHODS: PAID ADVERTISING**

Rank	Method	1981	1991	2001	2011	2021	2023	
							Used	Rank Score (mean)*
1	Google search advertising	NA	NA	NA	NA	NA	45%	1.4
2	Other online advertising**	NA	NA	NA	22%	50%	41	1.8
3	Direct-mail promotion	1%	9%	9%	21	9	6	2.6
4	Local TV and/or radio***	1	1	4	11	7	7	3.0
5	Local newspapers	2	10	19	23	9	10	3.3
6	Yellow pages paid advertising†	NA	47	57	59	13	8	3.4

\*Respondents who had ever used each method ranked its effectiveness in improving profit compared with the other methods, with 1 being the best.  
 \*\*2011-2021 studies did not differentiate between Google search advertising and other online advertising; figures shown here are for all online advertising.  
 \*\*\*1997-2005 studies differentiated between TV and radio; figures shown here are for radio, which was reported by higher percentages of respondents.  
 †2011 and prior studies differentiated between yellow pages boldface listing and display advertising; figures shown here are for boldface listing, which was reported by higher percentages of respondents.

**TABLE 8C  
USE OF PRACTICE-BUILDING METHODS: OTHER EXTERNAL MARKETING**

Rank	Method	1981	1991	2001	2011	2021	2023	
							Used	Rank Score (mean)*
1	Facebook page	NA	NA	NA	NA	87%	78%	1.6
2	Instagram**	NA	NA	NA	NA	66	71	2.2
T-3	Videos on website	NA	NA	NA	NA	54	40	3.1
	TikTok***	NA	NA	NA	NA	9	21	3.1
5	Solicit publicity in local media	NA	13%	17%	23%	20	17	3.3
6	YouTube†	NA	NA	NA	NA	19	21	4.0
T-7	Blog	NA	NA	NA	NA	24	21	4.3
	Practice newsletter	NA	18	15	29	13	5	4.3
9	Twitter	NA	NA	NA	NA	15	12	4.9

\*Respondents who had ever used each method ranked its effectiveness in improving profit compared with the other methods, with 1 being the best.  
 \*\*2015-2017 studies did not offer Instagram as an option, so it would have been included under "Other social media."  
 \*\*\*2019 Study did not offer TikTok as an option, so it would have been included under "Other social media."  
 †2015-2021 studies did not offer YouTube as an option, so it would have been included under "Other social media."

**TABLE 8D  
USE OF PRACTICE-BUILDING METHODS: EXTERNAL REFERRALS**

Rank	Method	1981	1991	2001	2011	2021	2023	
							Used	Rank Score (mean)*
1	Entertainment and gifts to GPs	45%	61%	69%	75%	76%	86%	2.7
2	Participate in community activities	62	57	59	62	65	72	2.8
3	Letters of appreciation to GPs	82	81	72	72	66	64	3.3
4	Reports to GPs	65	71	69	69	75	66	3.4
5	Education of GPs	41	34	37	43	35	44	3.8
6	Participate in dental society activities	67	62	61	57	53	56	4.1
7	Seek referrals from other professionals (non-dentists)	NA	30	27	30	39	44	4.8

\*Respondents who had ever used each method ranked its effectiveness in improving profit compared with the other methods, with 1 being the best.

Most methods of seeking referrals increased in usage since the 2021 Study, possibly due to the end of pandemic restrictions (Table 8D). For the first time, entertainment and gifts to GPs were rated as more effective than participation in community activities. Reports to GPs continued a gradual decline in usage since the 2011 Study. Usage of entertainment and gifts had been discontinued by 12% of the respondents, participation in community activities by 15%, letters of appreciation by 16%, reports by 15%, education by 30%, participation in dental society activities by 26%, and referrals from other professionals by 16%. Except for letters and reports, these percentages were all lower than in 2021.

For the first time, referral awards to patients and parents were rated as more effective than follow-up calls after difficult appointments (Table 8E). Use of referral awards had been stopped by 16% of the respondents, compared with 18% for follow-up calls, 18% for letters of appreciation, 14% for staff referrals, and 29% for entertainment

of patients and parents—all except referral awards representing high marks since 2017.

Usage of new-patient incentives generally continued to decline (Table 8F). No-charge initial visits were still rated the most effective method, but a discount for up-front payment was offered by slightly more respondents. No-charge initial visits were used by the lowest percentage of respondents since the 2011 Study, no initial payment by the lowest percentage since 2005, and marketing videos by the lowest percentage since this item was first included in 2015. Ten percent of the practitioners said they had stopped using an extended payment period, 14% had stopped using no initial payment, and 12% had stopped using marketing videos, which were all the highest levels of discontinuation since 2017.

Each of the three surveys between 2017 and 2021 included an open-ended question in which respondents could list any management changes they had made. The present questionnaire returned to a listing of specific items. In Table 8G, those

**TABLE 8E  
USE OF PRACTICE-BUILDING METHODS: INTERNAL REFERRALS**

Rank	Method	1981	1991	2001	2011	2021	2023	
							Used	Rank Score (mean)*
1	Referral awards to patients and parents	NA	NA	NA	NA	48%	49%	2.2
2	Follow-up calls after difficult appointments	NA	63%	64%	67%	81	78	2.3
3	Letters of appreciation to patients and parents	63%	74	64	63	58	57	2.3
4	Seek referrals from staff members	NA	52	50	57	64	55	2.8
5	Entertainment of patients and parents	17	10	20	49	17	29	3.3

\*Respondents who had ever used each method ranked its effectiveness in improving profit compared with the other methods, with 1 being the best.

**TABLE 8F  
USE OF PRACTICE-BUILDING METHODS: NEW-PATIENT INCENTIVES**

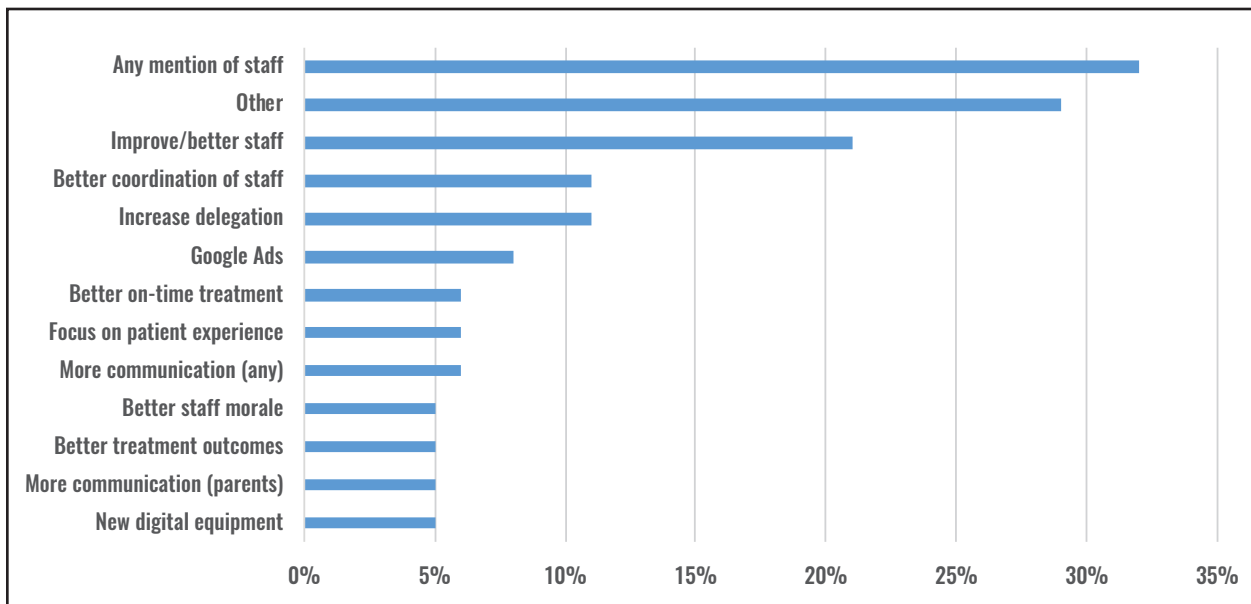
Rank	Method	1981	1991	2001	2011	2021	2023	
							Used	Rank Score (mean)*
1	No-charge initial visit	43%	62%	72%	84%	96%	91%	1.9
2	Extended payment period	NA	NA	29	53	84	80	2.8
3	No-charge diagnostic records	NA	NA	14	29	55	68	3.6
T-4	Discount for up-front payment	NA	NA	NA	80	89	94	3.8
	Same-day start	NA	NA	NA	NA	NA	70	3.8
	Use digital case presentation	NA	NA	NA	NA	65	65	3.8
7	No initial payment	NA	NA	16	21	16	14	3.9
8	Use marketing videos in waiting room	NA	NA	NA	NA	23	19	6.1

\*Respondents who had ever used each method ranked its effectiveness in improving profit compared with the other methods, with 1 being the best.

who left the open-ended question blank in 2021 are counted as non-users of each method, which accounts for the apparently substantial increase in usage between 2021 and 2023. In fact, usage was only slightly higher in the present Study than in 2015. On-time case finishing was the change re-

ported by the highest percentage of practices in 2023 and was also rated the most effective, followed by on-time appointments.

The 2023 survey contained an open-ended question worded as, “Please indicate in a few words what management changes you have made



**Fig. 3 Responses to the question, “Please indicate in a few words what management changes you have made that you feel have had the biggest positive impact on increased profits in your practice.”**

**TABLE 8G  
USE OF PRACTICE-BUILDING METHODS: MANAGEMENT CHANGES**

	1981	1991	2001	2011	2021*	2023	
						Used	Effectiveness**
On-time for appointments	47%	69%	70%	73%	23%	93%	3.4
On-time case finishing	NA	58	71	66	18	96	3.5
Change case presentation	44	48	52	50	16	77	2.9
Change staff management	48	47	43	41	18	79	3.0
Change patient education	28	38	42	49	12	79	3.1

\*In 2017-2021 studies, respondents were asked to list specific changes made in an open-ended question; those who left the question blank in 2021 were counted as not using the method for purposes of this table.

\*\*4 = excellent; 3 = good; 2 = fair; 1 = poor.

**TABLE 8H**  
**RANKING OF PRACTICE-BUILDING METHOD CATEGORIES**  
**(MEAN RANK SCORE\*)**

Rank	Category	2017	2019	2021	2023
1	Internal referrals	2.9	2.8	3.1	3.1
2	New-patient incentives	2.9	2.7	3.3	3.3
T-3	Other external marketing	3.0	3.6	3.1	3.4
	External referrals	3.4	4.0	4.0	3.4
5	Management changes	3.6	4.1	4.1	3.8
6	Paid advertising	5.1	4.8	4.8	4.8
7	Expand services	5.2	5.5	4.9	5.9

\*Respondents ranked the effectiveness of each category in improving profit compared with the others, with 1 being the best.

**TABLE 9**  
**SOURCES OF REFERRALS**

	% of Practices Using Source					Median % of Referrals (All Practices)				
	1985	1997	2009	2021	2023	1985	1997	2009	2021	2023
Other dentists (GPs)	99%	99%	98%	98%	100%	50%	50%	41%	30%	40%
Other dentists (specialists)	74	66	70	78	79	4	2	2	5	5
Patients	98	98	97	98	97	35	30	35	34	30
Personal contacts	NA	66	64	57	54	NA	2	2	1	1
Transfers	NA	68	58	42	56	NA	1	1	0	1
Staff	59	50	49	42	48	1	1	0	0	0
Other professionals	38	24	21	27	27	0	0	0	0	0
Direct-mail advertising	2	4	9	10	1	0	0	0	0	0
Yellow pages	47	44	40	3	0	0	0	0	0	0
Internet	NA	NA	NA	65	75	NA	NA	NA	7	10
Commercial advertising	1	8	14	10	10	0	0	0	0	0
Drive-by signage	NA	NA	27	30	21	NA	NA	0	0	0
Other	NA	NA	NA	12	11	0	0	0	0	0



that you feel have had the biggest positive impact on increased profits in your practice.” About a third of the respondents to this question mentioned some form of staff improvement (Fig. 3). Other changes listed by 5-11% of the practitioners includ-

ed more delegation, Google advertising, on-time treatment, focus on patient experience, improved communication, better treatment outcomes, and new digital equipment.

Internal referrals, new-patient incentives, and

**TABLE 10  
PRACTICE BUSYNESS BY SELECTED VARIABLES**

	<b>Too Busy to Treat All Persons Requesting Appointments</b>	<b>Provided Care to All Who Requested Appointments But Felt Overworked</b>	<b>Provided Care to All Who Requested Appointments— Did Not Feel Overworked</b>	<b>Not Busy Enough</b>
<b>Years in Orthodontic Practice</b>				
2-7 years	15%	14%	57%	14%
8-13 years	0	23	54	23
14-20 years	0	63	25	13
<b>21-30 years</b>	<b>6</b>	<b>19</b>	<b>38</b>	<b>44</b>
<b>31 or more years</b>	<b>6</b>	<b>6</b>	<b>53</b>	<b>35</b>
<b>Legal Status</b>				
Sole proprietorship	6	21	49	27
Professional corporation	0	23	50	27
<b>Community Size</b>				
Rural (less than 20,000)	11	22	56	11
Small city (20,000-50,000)	8	23	54	15
<b>Large city (50,000-500,000)</b>	<b>0</b>	<b>17</b>	<b>30</b>	<b>52</b>
Metropolitan (more than 500,000)	0	25	56	19
<b>Geographic Region</b>				
Northeast	8	8	62	23
South	7	36	29	29
Midwest	0	29	71	0
<b>West Central</b>	<b>0</b>	<b>13</b>	<b>38</b>	<b>50</b>
Pacific	0	27	45	27
COMPOSITE	3	21	46	30

external marketing continued to be ranked as the most effective of the seven practice-building categories, as in the past three surveys (Table 8H). For the first time, however, external referrals moved into a tie for third. As in every Study since 2017, the bottom three categories were management changes, paid advertising, and expanded services.

### Sources of Referrals

General practitioners regained their customary spot as the leading source of referrals after falling behind patients in the 2021 Study, possibly due to COVID-19 slowdowns (Table 9). The Internet was used by 75% of respondents and accounted for a median 10% of referrals—both high marks since this source was added to the questionnaire in 2011.

GPs were the top referral source for 54% of the respondents (tying an all-time high) and patients for 31% (an all-time low). Other dentists (specialists), while still accounting for only a median 5% of referrals, were the leading source for 13% of the practices (an all-time high). No other source provided more than 1% of referrals, as in every Study to date (the column of percentages

does not add up to 100% because medians are reported instead of means).

### Practice Busyness

Orthodontists appeared to be busier than ever during the pandemic, perhaps because of staff shortages or infection-control requirements. Overall busyness in the present survey was much closer to the levels reported in 2019 (Table 10). The percentage of respondents who said they were “not busy enough” jumped to 30%, compared to 17% in 2021 and 32% in 2019. On the other hand, only 3% said they were “too busy to treat all persons requesting appointments,” compared to 7% in 2021 and 2% in 2019.

The categories with the highest percentages of “not busy enough” respondents were the older practices and those in large cities and the West Central region. The busiest categories, with a total of more than 40% in the “too busy” and “overworked” columns, seemed to be orthodontists in practice for 8-20 years and those in the South region.

(TO BE CONTINUED)