

MANAGEMENT & MARKETING

(Editor's Note: This quarterly JCO column is compiled by Contributing Editor Robert Haeger. Every three months, Dr. Haeger presents a successful approach or strategy for a particular aspect of practice management. Your suggestions for future topics or authors are welcome.)

In my last column, I reported a statistical analysis of the economic impact of two-phase vs. single-stage orthodontic treatment, based on data from my own practice. This month's Management & Marketing explores the financial impact of Phase I treatment on a much broader sample of orthodontic practices: the Schulman Study Group, an association of highly successful orthodontists from around the country. Founded in 1977 by Martin L. "Bud" Schulman, the group pools sensitive financial and treatment information from isolated practices to help its members improve patient care and management. This collaborative process provides valuable insights into the financial aspects of our specialty, unmatched by other health-care organizations.

Recently, with the assistance of Dr. Roger Colberg, a statistician and marketing consultant, data from the Schulman Study Group were used to analyze expense factors, treatment methods, and profitability in orthodontic offices. Some of the more interesting overall results will be presented in this column. In the first installment, we address the age-old issue of the effects of two-phase orthodontic treatment on practice profitability. You may find the results surprising.

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Statistical Analysis of Phase I Treatment Profitability in 93 Practices from the Schulman Study Group

Every year, the members of the Schulman Study Group submit their individual office statistics for an assessment of practice efficiency. The practices are evaluated in many areas, including bracket types, marketing ideas, bonding methods, and treatment procedures. The present article discusses the financial implications of two-phase orthodontic treatment vs. single-stage comprehensive therapy.

The popularity of Phase I treatment is probably due to four major factors:

1. Many clinicians believe two-phase treatment provides better orthodontic results than single-



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TABLE 1
MEAN DATA FROM SCHULMAN STUDY GROUP

	All Practices	>15% Phase I	<15% Phase I	p
Number of practices	93	47	46	
Revenue	A	A - \$909	A + \$929	.496
Net income per doctor	B	B - \$69,048	B + \$70,549	.046
Net income per doctor day	C	C - \$344	C + \$352	.045
Doctor days worked	196.8	195.2	198.4	.414
Associate days worked	100.8	89.1	113.3	.190
% of practices with associates	35.5	37.0	34.0	.384
Phase I fee	\$3,039	\$3,198	\$2,872	.036
Phase II fee	\$4,190	\$4,195	\$4,185	.482
Total Phase I + II fee	\$7,229	\$7,393	\$7,058	.129
Full-treatment child fee	\$5,437	\$5,572	\$5,299	.042
Patients in Phase I	163.9	257.5	68.2	.000
Patients in Phase II	127.1	186.6	66.3	.000
Patients in full treatment	721.8	596.5	849.8	.001
% of patients in Phase I	15.1	23.3	6.7	.011
% of patients in Phase II	11.4	16.4	6.3	.059
% of patients in full treatment	68.1	54.9	81.6	.002
Overall conversion % (starts/exams)	69.8	71.8	67.7	.330
2006 conversion %	53.1	54.5	51.7	.393

stage treatment.

2. Many 8- and 9-year-old children want to start treatment early so they will appear older. In addition, young children tend to be eager to pursue orthodontic treatment at the initial office visit. Because the parents are unlikely to look elsewhere, starting treatment right away can prevent the loss of patients to other practices.

3. The specialty has long promoted the advantages of early preventive treatment, resulting in strong parental interest in early orthodontic care.

4. Orthodontists and consultants believe that because the total fees for two-phase treatment are greater than those for single-stage comprehensive treatment, the former is more profitable.

This article will focus on the fourth argument for Phase I treatment, without attempting to evaluate the quality of outcomes or the efficiency of treatment.

Methodology

The data used in this study were drawn from 93 practices in the Schulman Study Group. Eight offices were excluded as outliers in a scatter diagram or because of their practice styles. All the offices are geographically separated, with limited cross-referral areas. The data were collected and

analyzed by Dr. Colberg.

The respondents were divided into two groups for comparison, based on whether the percentage of active patients in Phase I treatment was greater or less than 15% (the median percentage of Phase I patients in the entire sample). The financial implications of changes in the percentages of Phase I patients and full-treatment patients were evaluated by regression analysis.

Results

Results for the entire sample and the two subgroups are shown in Table 1. Interesting findings included:

1. Gross revenues for the two subgroups were virtually identical.
2. The average net income per doctor was nearly \$140,000 more in the <15% group than in the >15% group. This difference was statistically significant at the .05 level.
3. The average net income per doctor day worked was \$696 more in the <15% group than in the >15% group.
4. Overall, the practices charged \$1,792 more for two phases of treatment than for single-stage comprehensive therapy.
5. The >15% group charged more than the <15%

group for both single-stage comprehensive treatment and two-phase treatment.

6. The >15% group had more than three times as many patients in Phase I and II treatment compared with the <15% group.

7. The number of doctor days worked was virtually identical in the two subgroups. (These numbers seem high because group and solo practices were combined.)

8. Although the percentages of practices with associates were similar, the associates in the <15% group worked an average of 24 more days than those in the >15% group.

9. The overall and annual conversion rates (starts divided by exams) were not significantly higher in the >15% group than in the <15% group.

Regression analysis showed that each percentage-point increase in Phase I cases above the mean of 15% was associated with a decrease in net income of \$7,159. Moreover, each percentage-point increase in full-treatment cases above the mean of 68% was associated with an increase in net income of \$4,155. In other words, the higher the percentage of Phase I patients in the practice, the lower the net income for the office.

To rule out the possible effects of associate days worked on the data, regression analysis was conducted separately for the practice samples with and without associates. Practices with associates showed a decrease in net income of \$7,125 for each percentage-point increase in Phase I patients, which was comparable to the figure for all practices combined. Therefore, the use of associates did not affect the profitability of Phase I treatment.

Discussion

In a previous article (JCO, March 2008), we demonstrated that two-phase orthodontic treatment was much less efficient than single-stage comprehensive treatment in a single office. Corroborating these findings, the present study shows that in a geographically diverse sample of 93 offices from around the country, the use of two phases of treatment did not increase the financial return to the orthodontists.

The previous article found that the office

would have had to charge at least \$3,000 more for two-phase treatment than the full-treatment fee to produce the same return. Practices in the current sample charged nearly \$1,800 more on average for two-phase treatment than for single-stage comprehensive treatment. It might be expected that offices charging more for two-phase treatment would be more profitable, but the reverse was true. The <15% Phase I practices had a much greater net financial return than the >15% Phase I practices. This may be because the <15% practices spent their time on more profitable procedures.

Even with lower fees and lower conversion rates, the practices with fewer Phase I patients showed greater profitability than those with more Phase I patients. The additional profit for each percentage-point decrease in Phase I patients was \$7,159. Although it may seem counterintuitive, if an office reduced its percentage of active patients in Phase I treatment from 25% to 15%, its profits would rise by \$71,590.

These findings disprove the conventional wisdom that two-phase treatment is more profitable than single-stage comprehensive treatment. The decision of whether to undertake Phase I treatment should be based not on the financial return to the orthodontic office, but rather on the patient's needs and the parents' wishes. Persuading parents of young children to delay orthodontic treatment and return later for single-stage comprehensive treatment results in a "win-win" situation for both patients and doctors. It shows parents that we are less interested in making money than in timing treatment to maximize the orthodontic benefits and limit the number of appointments and expense. That, in turn, increases the chances that they will select us for future care.

Although the present study did not evaluate the orthodontic results of Phase I treatment, both this article and the previous one have shown the inefficiencies of Phase I treatment in terms of the number of appointments, treatment time, and financial return to the practice. It can be concluded that Phase I treatment is neither more efficient for the patient nor more profitable for the practice than single-stage therapy. □