



Increasing Practice Efficiency and Profitability Using In-Ovation® Self-Ligating Brackets

White Paper by

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Dr. Jerry Clark is a board certified orthodontist who maintains a fulltime practice in Greensboro, NC. He received his BS and DDS from the University of North Carolina and his MS in orthodontics from St. Louis University. He is also Chairman of the Board of Bentson Clark, a company that specializes in the sale and transition of orthodontic practices.

Jack Gebbie

Mr. Jack Gebbie is president of Datatex, Inc. and handles research projects for both national and regional companies for over 11 years with particular experience and expertise in the fields of healthcare and financial services. He is a graduate of Wake Forest University and is a member of CASRO (Council of American Survey Research Organizations) and conforms to the research integrity and standards established by this national organization.

Dr. Clark / Mr. Gebbie Biography	
How was this study performed?	1
What was specifically studied?	5
Are self-ligating brackets really faster? More efficient? Better?	6
What were the findings of the study?	10
How did the reduced chairtime impact practice profitability?	6
So, what's the bottom line?	
Bibliography	11

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Many unsubstantiated claims have been made concerning self-ligating bracket systems as to their efficiency in moving teeth, the time savings that can be realized by using these appliances, and the “magic” that is somehow stored up in these brackets to more effectively align teeth. This study was done in an effort to draw some scientifically based conclusions to more accurately differentiate between what is “hype” and what is actually true regarding the purported increased efficiency and time savings of one such self-ligating bracket system In-Ovation® R - manufactured by Dentsply Sirona Orthodontics. The study was performed to determine if cases treated with In-Ovation R brackets were actually treated faster, with fewer and shorter appointments with less clinical chairtime needed to complete treatment, and if they truly increase practice efficiency and profitability compared to similar cases treated with traditional edgewise brackets.

Are there other scientific studies available?

Recently, there has been a cry from the scientific community regarding evidence based studies that will differentiate between opinion and fact. It is important for our profession, if we are to remain rooted in scientific principles, to honestly research, study and report on the claims made by our fellow professionals and the orthodontic supply companies. At the present time there actually have been a surprising number of scientific studies performed that have reported the increased efficiency of self-ligating brackets. Most of these reports, however,

have studied other bracket systems such as Damon and Speed. To date no scientific study has been applied exclusively to the In-Ovation bracket system and the treatment and chair time savings resulting from using this appliance. That is the reason for this research study.

How was this study performed?

Treated orthodontic cases were randomly selected from the practice of Dr. Jerry Clark, a board certified orthodontist. No attempt was made, in this study, to quantify the quality of the final treatment results. It was assumed that Dr. Clark utilized all his technical skills and abilities to achieve the best treatment results possible for each individual patient. 114 cases treated with In-Ovation R were studied and compared to 241 cases treated with traditional pre-torqued and pre-angulated brackets. This produced a confidence level for this sample of 95% +/- 8%. Certain types of cases were eliminated from the study. Those excluded were: cases with an unusual number of missed or broken appointments, cases with an unusual number of loose or broken brackets, cases that required two-phase treatment, cases with significant skeletal discrepancies (Class III, skeletal open bites), cases with impacted canines, cases with extremely poor cooperation, and cases where some other circumstance significantly impacted Dr. Clark’s ability to complete treatment in a reasonable length of time.

This research project was managed by Jack Gebbie, President of DATATEX, Inc., an independent research and

consulting firm specializing in market research. The data files were carefully reviewed and marketing research standards were applied to the sampling to ensure comparisons would be valid across the two alternatives being studied. DATATEX is member of CASRO (Council of American Survey Research Organizations) and maintains research integrity and standards consistent with this organization.

What was specifically studied?

The study was fairly simple in its design. Patients treated with traditional edgewise brackets and Roth and Tweed type mechanics with the goal of attaining the Andrews 6 Keys to Occlusion were compared to cases treated with In-Ovation R brackets and the light wire mechanics typically used with self-ligating brackets with the goal of achieving similar treatment objectives. The time required to place appliances at the beginning of treatment and the time necessary to remove appliances at the end of treatment was not included, since it is realistic to assume that it takes approximately the same amount of time to place and remove brackets regardless of

the type of brackets being used. What was studied was the actual treatment time from the day treatment was begun to the day appliances were removed. Also, the total number of patient visits needed to complete treatment was measured as was the total number of minutes of patient chairtime necessary to complete treatment.

Are self-ligating brackets really faster? More efficient? Better?

The answer is YES!

What were the findings of the study?

MONTHS IN TREATMENT

The average number of months required to treat cases utilizing In-Ovation R was 4.14 months LESS than comparable cases being treated using traditional edgewise brackets.

NUMBER OF APPOINTMENTS

The average number of patient appointments needed to complete treatment was REDUCED by 6.66 appointments or put another way 40% FEWER appointments were required to complete treatment using In-Ovation R compared to traditional edgewise appliances.

CHAIRTIME REQUIRED TO TREATCASES

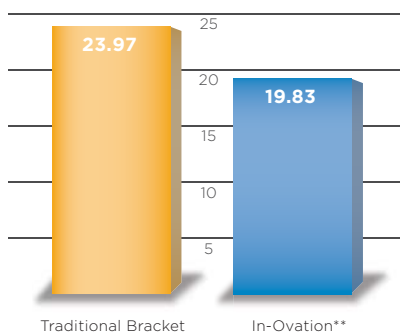
The number of minutes of clinical chairtime that patients required in order to complete treatment was REDUCED by an average of 174.21 minutes (approximately 3 FEWER hours) per patient. That means the average case being treated with In-Ovation R took approximately 5 hours of chairtime to treat while the average case being treated with traditional appliances took almost 8 hours to treat.

How did the reduced chairtime impact practice profitability?

If your practice produces a profit of \$350 per hour (an average figure for an active, well-managed practice), and you are able to save 3 hours on each case you treat, then the profit for each case treated is INCREASED by approximately \$1050. However, In-Ovation R brackets do cost more than traditional edgewise brackets by approximately \$5 per bracket. That means if you bond 5 to 5 you use approximately 20 brackets on each case for an additional expense of about \$100 per case. So the actual estimated additional profit for each case using this scenario is about \$950.

Months in Treatment*

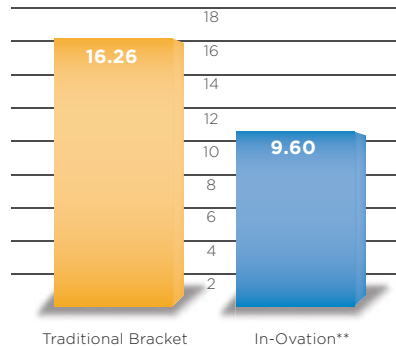
Ages 10-59



*In-Ovation finishes equivalent cases approximately 4 months sooner than traditional brackets with ties.

Number of Appointments*

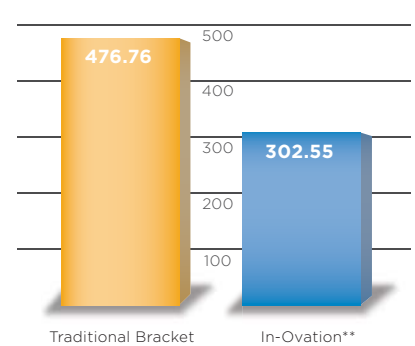
Ages 18-59



*In-Ovation averages 40% fewer appointments than traditional brackets with ties.

Chair Time in Minutes*

Ages 18-59



*With In-Ovation, doctors realize an approximate chairtime savings of 3 hours per patient.

That is a pretty good return on an additional investment of \$100 for In-Ovation R brackets. However, this is just an average. If your practice profit per hour is less than \$350 per hour then your savings will be somewhat less. But, if your practice profit is more than \$350 per hour then your profit will increase even more.

So, what's the bottom line?

Granted, competent and conscientious orthodontists can most likely obtain excellent treatment results regardless of the type of appliances they choose to utilize. I am often questioned by my colleagues, "I am already getting good treatment results with my present appliance system. Why should I change?" The critical and more important question is, "What is best for our patients?"

If we as orthodontists are committed to providing the very finest treatment for our patients, I personally feel it is important that we look at the findings of this study and draw the obvious conclusions concerning the treatment of our patients. If we want to provide the very finest orthodontic care, in the most cost effective manner, with the least amount of discomfort to our patients, with the fewest number of visits required, provide shorter appointment times, and complete treatment as quickly as possible, I feel it now requires us to avail ourselves of the advanced technology of self-ligation. Anything less would not be providing the finest available treatment for our patients.

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