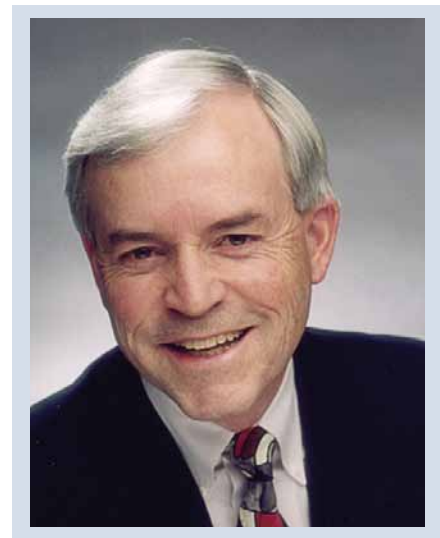


An interview with

David L. Turpin (editor-in-chief of the AJO-DO)

- Graduate in Dentistry from the University of Iowa, Iowa City, 1962.
- Master in Orthodontics from the University of Washington, Seattle, in 1966.
- Diplomate from the American Board of Orthodontics.
- Editor of the American Journal of Orthodontics and Dentofacial Orthopedics.
- Editor of the Bulletin of the Pacific Coast Society of Orthodontics from 1978 to 1988.
- Editor of Angle Orthodontists from 1988 to 1999.
- Clinical Professor, Department of Orthodontics, University of Washington – Seattle.
- Author of more than 150 editorials, scientific articles and book chapters.



Dr. Turpin attended dental school at the University of Iowa located in the Midwest, then gained entrance as a resident in orthodontics to the University of Washington in Seattle. His primary goal was to study under the guidance of Alton W. Moore, then Chair in Seattle. Upon graduation in 1966, he started a private practice, returning to the University of Washington 4 years later to teach part time in the clinic. He has been married to Judith Clark Turpin for 48 years. They have three children and three grandchildren, ages 8 to 19. He has spent most of his spare time traveling widely during the past 10 years, so that may qualify as a current hobby. At the moment he is reading a book named, 'The Tipping Point' by Malcolm Gladwell and plan to start Dan Brown's 'The Lost Symbol' shortly.

Dr. Turpin has worked on orthodontic journals for over 30 years—from his early days on the Bulletin of the Pacific Coast Society of Orthodontists, to The Angle Orthodontist, and finally the American Journal of Orthodontics and Dentofacial Orthopedics. He will retire as editor-in-chief of the AJO-DO at the end of 2010 when Dr. Vincent G. Kokich will become the new editor.

Jorge Faber

What, in your opinion, is the direction orthodontics is likely to take in terms of diagnosis in the next 10 years? Flávio Cotrim

I believe practitioners who start with a sound orthodontic education, strive for Board certification and strive to establish an 'evidence-based practice' will be seen by the public as the most successful. Involvement in the community as well as clinical teaching are also attributes that will always improve clinical abilities. I know that when I look for a new specialist in medicine, this is the type of professional I search for.

I enjoyed the private practice of orthodontics in a small town near Seattle, Washington, for nearly 38 years. Throughout my graduate school education and for years after as I taught part-time at the University, I always believed that early orthodontic treatment was good and the longer I treated someone, the more effective I was at correcting almost any malocclusion. Several years ago as Editor of the AJO-DO I started receiving articles relating to the inefficiency of correcting Class II skeletal problems with two-phase treatment over a period of many years. More specifically these were the randomized controlled trials from the University of North Carolina and from Manchester, England. At first I wanted to dismiss them as possibly sensational, not related to the way I treated patients. I was confident that the early interception of Class II malocclusion was effective in reducing overall treatment time, the need for extractions, and it achieved better treatment outcomes. When the skeletal disharmony was great, I promised some patients that we might be able to overcome the need for jaw surgery—even when the patient's mother or father had already experienced orthognathic surgery years earlier.

But as time passed, other studies continued to report similar findings and I began to look more closely at my own treatment outcomes, comparing them more specifically to the UNC study. I began to see that a certain percentage of my Class II patients required a long 2nd phase of treatment and some of the patients I treated the longest did not always have the best results.

Could I learn something from these long-term studies? I began to realize that two-phase treatment for Class II skeletal problems is often effective, but it may not always be the most efficient and may not even be necessary in every instance. I know realize we obviously have a broader range of times when patients can be treated and much of this timing depends upon other factors, such as development of the dentition, the presence of injurious habits, physical maturation, psychosocial factors, etc.

Following up on the previous question, what is the most likely evolutionary path of orthodontic mechanics? Flávio Cotrim

The use of miniscrews will continue to have a major impact on treatment planning for years to come. Based on more recent studies, the use of mini-plates is beginning to show greater change in skeletal relationships than once thought possible. The use of lingual appliances for a specific percentage of the population will also grow in use, especially in the larger cities. My opinion is that those companies that stress shorter and shorter treatment times at the expense of high quality outcomes will not maintain their popularity with the public. In the future patients will be even more demanding of quality than in the past and those who cannot deliver will not remain in business. There are people who claim that much of the published literature is poor and therefore deserves to be ignored... justifying the use of any modern treatment methodology that comes along. I have never gone along with that philosophy, noting that we can learn a great deal from the past. In fact, the highest levels of research findings published today are currently endorsing many of the principles of treatment practiced by orthodontists for the past 50 years. One such example is a meta-analysis published by Burke et al¹ in 1998, where the authors note in summarizing 26 long-term studies of mandibular intercanine width... "Overall, this meta-analysis supports the concept of maintaining initial intercanine width in orthodontic treatment."

From your vantage point, what areas of orthodontic practice are most deprived of in-depth studies? Flávio Cotrim

We need more prospective controlled clinical trials to answer the 'real concerns' of today's practitioners. Some of these studies should be continued for years by a series of investigators with the goal of providing the long-term findings so badly needed. People who have gradually started treating more of their patients nonextraction by expanding the dentition beyond the norm should be first in line to support such research. Plans have been underway to do just this type of research by the Universities of Washington and Oregon in what is called the Precedent Program. Thus far nearly 60 private offices have volunteered to participate in following a protocol set by university biostatisticians for a series of prospective trials to answer the questions agreed to by these involved offices. As digital progress records are gathered and regularly transferred directly to the universities for analysis, sample sizes will increase and potential biases strictly controlled. This is one direction I see as being productive for orthodontic research in the future.

Please envisage the following scenario. A well-designed randomized clinical trial is published in a journal such as the AJO-DO, and this work strongly suggests a paradigm shift in clinical decision-making. What is your perception regarding the difficulties and speed with which such information will reach clinical orthodontists and ultimately benefit patients? Flávio Cotrim and Jorge Faber

It seems that any major change in practice dynamics takes 5 to 10 years to be fully assimilated. For example, the use of miniscrews has been around that long and we finally have the research studies in large enough numbers to support their use by more than 50% of all practicing orthodontists.

According to data provided by CAPES (Brazilian public institution that evaluates

graduate teaching and personnel), Brazil produces 9% of all dental literature in the world. Do you believe this is also the case in orthodontics? In other words, how do you analyze quantitatively and qualitatively Brazilian scientific publications in orthodontics? Flávia Artese

If orthodontic web site hits mean anything, I can believe the influence of Brazil orthodontic research and clinical activity may be in the realm of 9-10%. This is also a reflection of the large number of teaching programs now active in the Brazil.

Communications have changed dramatically after the digital revolution. We have seen a few changes to this effect in the AJO-DO online only publications. How do you see the possibility of a 100% digital journal in the future? Flávia Artese

The answer to your question is basically 'unknown'. It is obvious every year that increasing numbers of our subscribers prefer to search for articles online, and refer to their print journals less and less often. Within 5 years I am quite sure more members will read their journal on an electronic reader, like the Kindle, than will pick up a printed and bound copy to leaf through while sitting in a comfortable chair by the fireplace. But will the hardcopy be gone forever...I simply don't know.

The speed with which new information is produced has also changed in the last decade. Nowadays, in your opinion, what do professionals need in order to keep up to date while practicing efficiently and safely based on evidence? Flávia Artese

To understand the answer to this excellent question, I have always looked to my peers for the secrets of success. I see them joining and actively participating in study clubs as soon as they start practice. If the members continually challenge each other to improve many of these study clubs remain active for years and years.

If the members continually challenge each other to improve. I see them studying to become Board certified as soon as it is possible. Then with these hurdles conquered, I see these same peers taking on responsibilities to teach, lecture and even publish evidence of their specific expertise. They might volunteer to be a scientific journal reviewer and in doing so, will continue to learn how to become a better practitioner. As you can tell, your peers have much to offer if you are ready to look and listen.

I have been keeping track of editorials, commentaries and papers that have been recently published in the AJO-DO regarding the value of RCTs in scientific evidence. Have you noticed any changes in the quality of manuscripts submitted to the AJO-DO in this respect? Are the researchers in orthodontics trying to meet this need? Flávia Artese

Independent review is an important step in the publication process of many scientific journals, including some dental journals. One of the reviewer's challenges is to identify sources of bias in research. Bias can easily creep into a study in any number of ways. For example, if a study is not properly blinded, the person measuring outcomes can inadvertently introduce bias. Financial conflicts of interest might also play a role. When planning a scientific study, it is of utmost importance that a biostatistician be involved at the very beginning. It is amazing to me how many authors conduct an impressive study and submit a manuscript without every having completed a power determination to calculate the number of subjects required for statistically significant conclusions. This must be determined prior to initiating the study, not after gathering the data from the available subjects. Most journals say they believe in relying on independent review. How thorough they are in carrying that out is the concern.

What were the major changes you witnessed in orthodontics during the years you

were Editor-in-chief of orthodontic journals? Flávia Artese

Under the guidance of Vince Kokich, we have standardized the publication of case reports. With strictly enforced guidelines, case reports submissions have increased in both quality and number.

Vince works with each author to get their best work for the journal. With help from Michael Rennert, we moved the Journal's continuing education program to the AAO and made it available online, allowing for immediate grading and awarding of the appropriate continuing education credits. Thanks to our publisher, Elsevier, we moved to an electronic manuscript submission and review process. This has greatly speeded up the review process, and made the submission and review process available to many orthodontists around the world. Last year we received nearly 1,000 new submissions—compared with about 200 per year a decade ago. Our international prominence has expanded, while our manuscript acceptance rate has fallen to less than 30%. In 2006 we added the AJO-DO Product Resource Guide as a supplemental issue every April, providing a member benefit as well as additional revenues. With 13 issues published each year, we produce more pages of refereed scientific material than any other orthodontic journal. The AAO has successfully limited the increase in cost per/member to only \$3 over the 10-year period. To help deal with the growth in submissions, we expanded the use of associate editors, noted for their specific areas of expertise. Associate editors appoint reviewers, evaluate reviewers comments, make recommendations, and evaluate revised submissions. This expansion is still ongoing. Most recently, we initiated the abridged 2-page format for research studies, aimed at reducing the current publication delay while also giving the Journal a more clinical appearance.

When planning a study, what are your main tips for aspiring authors at the time of

writing a manuscript? Jorge Faber

When planning a scientific study, it is of utmost importance that a biostatistician be involved at the very beginning. It is amazing to me how many authors conduct an impressive study and submit a manuscript without every having completed a power determination to calculate the number of subjects required for statistically significant conclusions. This must be determined prior to initiating the study, not after gathering the data from the available subjects.

To assist in meeting the challenge of conducting a systematic review, be aware that the CONSORT (Consolidated Standards of Reporting Trials) guidelines are developed by a team of dedicated journal editors, epidemiologists, and statisticians. CONSORT (www.consort-statement.org) comprises a checklist and flow diagram to help improve the quality of reports of randomized controlled trials (RCTs). The QUOROM checklist and flow diagram are available (www.consort-statement.org/consort-statement/overview/) for those with an interest in the field of meta-analysis. Moose (Meta-analysis of Observational Studies in Epidemiology) (2000) is also used for conducting meta-analyses of observational studies. SORT (Strength of Recommendation Taxonomy) (2004) is another tool for rating individual studies and bodies of evidence.

When writing the introduction to the topic, be thorough enough to include the major studies published, but strive to keep it relatively short. Accurately report prior findings of the best studies, yet make it clear why another study is needed now. When reporting experiments on human subjects, authors should indicate whether their procedures were in accordance with the ethical standards of the responsible committee on human experimentation and the Helsinki Declaration of 1975, as revised in 2000. When reporting experiments on animals, authors are asked to indicate whether the institutional and national guidelines for the care and use of laboratory animals were followed.

Structured abstracts of 200 words or less are

preferred with every manuscript. A structured abstract contains the following sections: Introduction, describing the problem; Methods, describing how the study was performed; Results, describing the primary results; and Conclusions, reporting what the authors conclude from the findings and any clinical implications.

The manuscript proper should be organized in the following sections: Introduction and literature review, Material and Methods, Results, Discussion, Conclusions, References, and figure captions. Please record measurements in metric units whenever practical. Refer to teeth by their full name or their FDI tooth number. Nearly all journals now require electronic submissions and to only one journal at a time for review.

When an author's work is rejected by an editor, what sort of attitude would you recommend to authors in light of this negative response? Jorge Faber

All of the most highly respected educators and department chairs I know have had at least one manuscript rejected and they have learned from the experience. Manuscripts can be rejected for a variety of reasons, most are not personal and many have little to do with the abilities of the corresponding author. Articles can be rejected by an editor because the journal has already published similar studies, because they are better suited for a different type of journal, or simply because they are too long and not well-written. However, the most common reasons for rejection are a lack of statistical rigor due to small sample sizes and the presence of either real or perceived bias. Yes, bias is always present to some extent, but the good scientist works hard to minimize bias at every turn with a sound study design. It can be done and the effort is rewarded by every editor I've ever worked with.

Your tenure as chief editor of the AJO-DO is nearing its end after so many years of dedication to orthodontics. What are your

future plans? Jorge Faber

With conclusion of the 7th International Orthodontic Congress in Sydney, Australia, I expect to begin a 5-year term as a member of the WFO Executive Committee, joining Tom Ahman and Amanda Maplethorp representing North America. I look forward to working with Roberto Justus (Mexico City) who will succeed Athanasios Athanasiou as president of the WFO and William DeKock (Cedar Rapids) who will continue as secretary-general. I also have 3 grandchildren who live on the East Coast, so expect a few more trips in that direction will be in order. Of course, when called upon I will always be available to help the next editor of the AJO-DO in any way possible.

Flávia Artese

- Adjunct Professor of Orthodontics, Rio de Janeiro State University (UERJ).
- Master and PhD in Orthodontics from Rio de Janeiro Federal University (UFRJ).
- Diplomate from Brazilian Board of Orthodontics and Dentofacial Orthopedics (BBO).
- President of the Brazilian Society of Orthodontics (SBO).

Flávio Cotrim

- Master of Orthodontics, School of Dentistry, University of São Paulo (FOUSP).
- PhD in Oral Diagnosis, FOUSP.
- Associate Professor, Master's Course in Orthodontics, City of São Paulo University.
- Author of the book: New vision in Orthodontics and Functional Orthopedics.
- Co-author of the book: Orthodontics - Clinical diagnosis and planning.
- Clinical director of the Vellini Institute.
- Scientific Editor of the São Paulo Association of Orthodontists (SPO) Journal of Orthodontics.

Jorge Faber

- Editor-in-chief of the Dental Press Journal of Orthodontics.
- PhD in Biology and Morphology – University of Brasília / Brazil.
- MSc in Orthodontics and Facial Orthopedics – Federal University of Rio de Janeiro / Brazil.

REFERENCES

1. Burke SP, Silveira AM, Goldsmith LJ, Yancey JM, Van Stewart A, Scarfe WC. A meta-analysis of mandibular intercanine width in treatment and postretention. *Angle Orthod.* 1998 Feb;68(1):53-60.

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