

## **Self-driven cars, self-driven patients, and company-driven orthodontists?**

**Klaus Barretto dos Santos Lopes Batista**

Recently, both at the university and during association meetings, there have been intense discussions about clear aligners as they relate to some recent marketing activities; there have also been discussions about the future of orthodontics in general.

I have followed the development of clear aligners since their beginning. I remember very well when I saw a clear aligner advertisement for the first time. I was sitting on an airplane and looking at a magazine when I came upon a page showing two faces looking at each other and smiling, one of them wearing clear aligners and the other with braces.

At that moment, it seemed that clear aligners were entering the orthodontic market as an alternative to fixed appliances. The target audience was adult patients, particularly women, and the benefit was to improve esthetics during treatment. Interestingly, the major investment in advertising publicity was directed at patients instead of orthodontists. Simultaneously, orthodontists were trained to work with aligners, and some of them became key opinion leaders.

Over time, clear aligners gained market share. Using a well-defined strategy, with an aggressive marketing approach directed at consumers as well as orthodontists, clear aligner companies invested continuously in technology and the development of product improvements. The marketplace in some countries, such as the United States, opened to include general dentists, who were encouraged to perform orthodontic treatment using clear aligners. Clear aligner companies expanded their product line to increase treatment possibilities. They realized exponential global growth. This was achieved with assistance from orthodontists, who ended up acting as major advertisers and sellers.

Aligner companies started recruiting patients directly and then referring them to their loyal orthodontist and dentist “consumers.” This began with their website referral systems. More recently, clear aligner scanning store locations have opened, with potential patients going there to have their teeth scanned; these patients

are then referred for treatment by various providers using the company’s product.

It seems that clear aligner companies are preparing themselves for a potential new market that may “provide orthodontic treatment with aligners” instead of only “providing aligners to the orthodontists and dentists who provide treatment,” as has been the case in the past. Some companies are currently enrolling consumer patients who send in their own dental impressions to receive sets of aligners without ever visiting an orthodontist or dentist for orthodontic treatment evaluation.

It is not productive to try to fight against technological advancement or new market trends. In the same manner that cars will soon not need drivers, it is possible that someday orthodontic treatment may be accomplished without an orthodontist. There will always be new market tendencies, fashions, and different user profiles with different levels of demand. However, everyone knows that human beings are not cars. Even with all the latest technological developments, all the accumulation of treatment data collected over the years, and the promises of artificial intelligence, the mathematical predictability of algorithms is far from being able to incorporate the unpredictability of biological individuality. This variation is responsible for the infinite combination of characteristics that make up the occlusal, oral health, and psychological conditions of individual patients. This is what makes performing orthodontics interesting and challenging to orthodontists.

It is clear to anyone who has ever provided orthodontic care to patients that it is not possible to achieve consistently good results without monitoring the progress of treatment and making adjustments as they are needed. It is not safe to treat patients without examining them and evaluating the ever-changing health of the tissues affected. Understanding these points and the investment by the specialty in high-quality scientific research are vital to the future of orthodontics.

The specialist societies, including the American Association of Orthodontists (AAO) and similar organizations around the world, should play a fundamental role in clarifying and resolving the uncertainties that exist today. They should not stand by without warning the public about the limitations of orthodontic devices

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and the harm that may result from unsupervised orthodontic care.

Now is the time for specialist societies to act cooperatively and transparently to deliver a campaign of information to the population. High-quality scientific research should be the basis of this campaign. Importantly, this campaign should not be directed only toward clear aligners; perhaps we are giving too much attention to that topic. It is really about all companies whose advertisements are deceptive or with no

scientific validation. Campaigns such as the consumer awareness program developed by the AAO, which already speaks out about the dangers of do-it-yourself orthodontics, are a welcome step and should be expanded to have greater impact.

Clear aligners should be considered as one more interesting tool in the orthodontist's toolkit. They have their pros and cons. Everybody deserves to be informed properly about this and about the other tools that are available as well.