**The key factors for future orthodontic prosperity: A commentary paper**

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**ABSTRACT**

In this brief commentary paper, we elaborate the differences between people-centered orthodontics and appliance-centered orthodontics with the clinical and extra clinical key factors that may help orthodontists in achieving prosperity in the future.

**Keywords:** Management, Human resources, Prosperity, People-centered orthodontics

**INTRODUCTION**

In the past two decades, remarkable changes have occurred in the orthodontic field, from master-oriented orthodontics to key opinion leader (KOL)-oriented orthodontics, with the current perception that evidence-based orthodontics is secondary to commercially driven orthodontics.

Until then, excellent masters in orthodontics were recognized worldwide as excellent clinicians and taught teaching orthodontics with the aim of spreading the art of diagnosis, treatment planning, and tooth movement.

Instead nowadays, self- or company-nominated KOLs tutor the use of a particular appliance and explain its superiority over others. Consequently, orthodontists are now considered merely, appliance (d)ea(l)ers, rather than (l)ea(d)ers of intellectual performance in diagnostic and therapeutic approaches.

This change has fostered the development of appliance-centered orthodontics (ACO), which targets patients’ problems instead of orthodontists’, when the orthodontists should be the ones to apply the actual evidence available at the moment and their clinical skills in a specific patient with a specific malocclusion.

Therefore, dealer companies have started believing that ACO is the key for communicating the orthodontic message to lay people so that they would seek the treatment dealers of a specific technique or appliance.

This kind of ACO leads to several concerns that are summarizes following: First, this approach is strategically mistaken[1] because people do not want to associate with tools that will engage them, cost them, and even make them “suffer” in some way;[2] second, the communication conveyed by the companies directly to the “consumers,” who are patients, could stimulate the demand for “do it yourself” (DIY) orthodontics, a growing phenomenon,[3] because the specialists are by-passed,
with possible consequent injuries for the public health; third, these companies try to increase their own profits as they have to respond to their investors, and hence, may send a budget-oriented message, that is, ethically and morally questionable, rather than to send a desirable code-oriented message.

Indeed, people-centered orthodontics (PCO) should be the ultimate goal for accurate communication of the orthodontic message, because people should be aware of the need and benefits of orthodontic treatment, and the role of the orthodontist in achieving these objectives, as orthodontics should not be a self-medication discipline or appliance-centered therapy.

Interestingly, orthodontics may contribute to the improvement in public health, especially in the post-pandemic era, by improving patients’ quality of life. The orthodontists as well as their staff should aspire for not only simple profit but also prosperity, because orthodontics provides growth, development, better life prospects, and confidence in the future, for all people involved in PCO.

Therefore, the aims of this commentary paper are to share the key factors that may be helpful in achieving prosperity using PCO, to help the orthodontic community overcome the crisis faced in the past 20 years, including the current coronavirus disease-2019 pandemic, and to contribute to the necessary health and socioeconomic reconstruction.

The key factors for prosperity using PCO are as follows:

**PEOPLE FIRST**

All people involved in PCO, including the staff in the orthodontic clinic, are the most important key factor for prosperity.

**Patients’ expectations**

When someone seeks a consultation, the first step should be writing and sharing the map of the planned orthodontic journey. Listen carefully why the patient desires orthodontic treatment, as PCO focusses on customization for a specific patient (when the acronym PCO is particularly referred to patients, it can be considered patient-centered orthodontics). Explain in a dedicated appointment to both parents (if minor) or the patient, “why” the therapy is necessary, focusing on the benefits on health and quality of life through the achievement of orthodontic goals, which should always be coherent with the patient’s expectations. Therefore, the realistic objectives should be clearly described and accurately explained to avoid results different from expectations, ultimately leading to patient dissatisfaction. Orthodontic specialists should consider the following ideal orthodontic treatment objectives during treatment planning:

- To avoid facial esthetic decline
- To avoid a discrepancy between centric occlusion and centric relation (Sunday bite)
- To correct the malocclusion
- To keep the periodontal tissues healthy
- To obtain long-term results.

The challenge for orthodontists today is to find appropriate solutions to achieve the aforementioned objectives and meet patient expectations.

The next step should be describing the family “how” the treatment would be provided for achieving the established orthodontic objectives in the most effective, efficient, comfortable, and predictable manner for long-term health and effects. Finally, explain “what” device would be used, explaining the reasons why some requested appliances might not suitable for that particular case. This “why, how, and what” process should be the guideline in PCO for optimum patient experience and be an integral part of treatment planning.

**Patients’ experiences**

There are various important clinical and extra clinical phases in the orthodontic journey during which the patients’ families should be satisfied. The following approach will help in achieving more than just meeting their expectations:

- The first contact usually occurs after the patients’ research for an orthodontist by referral from treated patients or on the web search engine results page (SERP), over a call, mail, or message, to either obtain more information or schedule the first visit. In this process, if the first contact is aimed to fulfill the patient expectations by explaining what they will experience in the appointment, the patient will have a positive approach throughout the first visit; however, the reverse is also true.
- The first visit and treatment planning appointments should include the provision of answers to all patient questions. If the complexity of the case warrants a more thorough case study, schedule a dedicated appointment with both parents, and if multiple options are available for treating the malocclusion, help them understand the differences between each treatment option using a synoptic table.
- The clinical protocols and the treatments should be effective, efficient, comfortable, and predictable to limit the negative impact on the family’s quality of life. Therefore, the skills of the orthodontist in both organizing the process and moving teeth play a fundamental role in the orthodontic journey of the patient.
- Digitalization, which is more than the simple substitution of analogic records with digital ones, because it converts a traditional experience into a novel
one, improving the people’s quality of life significantly. The pandemic has accelerated this conversion to promote the use of digital tools that shorten the distance in the provision of services, and this digitization may verisimilarly be applied in the orthodontic field even after the pandemic. For example, teleconsulting, largely used during the pandemic, may help the clinician in reducing chair-time and improving the patients’ experience in the upcoming future.

- Intangible dimensions[6] affect the quality perception directly: (1) Reliability, the ability to perform the promised service dependably and accurately; (2) assurance, the knowledge, courtesy, and ability to convey trust and confidence of the employees; (3) tangibles, the appearance of physical facilities, equipment, and personal communication materials should be coherent with orthodontics; (4) empathy, care, and individualized attention to families; and (5) responsiveness, the willingness to help and provide prompt service to patients.

Throughout the orthodontic journey of patients, the follow-up of perception, recorded by requesting feedbacks during all phases of the orthodontic journey, is fundamental to improve patient experience and to understand if the experience is satisfying.

The orthodontic team

The orthodontist, as the leader of the orthodontic crew, must ensure that the message conveyed by the office staff is consistent with PCO. This is necessary to strengthen trust, which should, in any field, especially in the health-care system, be the main value that governs human relationships. Therefore, any physical, intellectual, and economic effort, aimed to strengthen the trust in the relationship among people, is always a good investment. Therefore, the staff needs to be properly trained in the science of human resources,[7] which are summarized in the following points:

- Explain to the team, the differences between PCO and ACO to reinforce the awareness and motivation to be a part of health projects and their fundamental role in contributing to public health
- Write and share the job description with all members, focusing on their response-abilities, that is, their abilities to respond and to achieve the established clinical and extra clinical objectives by appropriate actions, which must always be oriented to fulfill patient needs
- Provide prompt positive feedback, every time it is needed, describing to the team member exactly the situation that could be improved, avoiding criticisms oriented to the person, and asking at least two possible solutions to address the inconvenience. Negative answers from the members are not acceptable. On the contrary, a negative feedback should only be provided in cases of serious setbacks and should be aimed to reset the relationship. These serious setbacks could be in the form of negative attitudes shown by the team members contrasting with the values, objectives, and aims of PCO
- Although the attitude of the team members depends on their own motivation, that is, their motives to act and why they work hard every day to do what they do, team building events should be a part of the meetings conducted periodically to reinforce their awareness regarding the meaning of their job
- Conduct a periodic meeting with the team, at least monthly, with the aim of sharing and proposing solutions and topics useful for improvement in practice, and create a collaborative atmosphere. This will also contribute to team building
- Relative to their attitudes, characteristics, responsibilities, and vocations, specific training programs should be scheduled periodically, to allow the growth of each member in their roles overtime.

THE MANAGEMENT CONTROL

This key factor represents the foundation on which the economic sustainability of PCO can be built to generate prosperity. Although management control is an extra clinic task, the orthodontist, as the leader of the team and the service, must have the necessary knowledge and skills to plan all sustainable strategies to provide a satisfactory orthodontic service,[8] using the following economic tools:

- Calculate the total annual fixed costs (TAFC), which are incurred even when patients do not undergo treatment. These costs include employees, rents, and financial loans.
- Calculate the total annual variable costs (TAVC), which are incurred when patients undergo treatment, including laboratory costs, orthodontic appliances, consumable costs, and charges of the operator, even if he/she is the orthodontist him/herself.
- Calculate the total business income before taxes (BIBT) which is the total annual revenue (TAR) subtracted by the TAVC and TAFC. The following equation summarizes this tool:

\[ \text{BIBT} = \text{TAR} - \text{TAVC} - \text{TAFC} \]

- Calculate the chair minute fixed cost (CMFC) dividing the TAFC by the total working weeks, average days per week, average daily hours, 1 h, 1 min, and number of treatment units (dental chairs in the case of orthodontic clinics). Estimate the orthodontic treatment total duration (OTTD) in minutes, required for the total number of appointments needed and multiply by the CMFC. This variable is the entire orthodontic treatment
fixed cost (OTFC). The following equation summarizes the process described above:

$$OTFC = OTTD \times CMFC$$

- Calculate the orthodontic treatment business income (OTBI), which is the total orthodontic treatment fee (TOTF) subtracted by the orthodontic treatment variable costs (OTVC) and OTFC. The following equation summarizes this tool:

$$OTBI = TOTF - OTVC - OTFC$$

- Calculate the break-even point by dividing TAFC by the contribution margin per-treatment, which is the average TOTF subtracted by the average OTVC needed to perform the orthodontic treatment; this tool indicates the minimum number of new cases required to cover the TAFC. Once the break-even point is reached, more the production, more is the business income, in a more than proportional relationship. The following equation summarizes the process described above:

$$BEP = \frac{TAFC}{TOTF - OTVC}$$

- Constantly monitor the trend of key performance indicators (KPIs) over the year, by monitoring the number of new patients seeking consultation, number of new treatments planned, total price of mutually accepted treatment plans, receipts, receipt/production ratio, and chair saturation rate to check the progress of the economy of the orthodontic clinic. Share the performance of these KPIs during team meetings to discuss methods for their improvement that would be consistent with PCO.

- If the number of new patients seeking consultation, number of new treatments planned, and chair saturation rate show undesirable trends, use some or all strategies, described in the next key factor, to invert the tendency.

EDUCATIONAL MESSAGES

That is, all communication with patients and their family members should be oriented to inform and educate on improving their health and quality of life and finding solutions to their problems. Therefore, the message of PCO should be shared internally and externally using various educational aids, with the aim to increase people's awareness regarding the positive effects of treatment on their health, because many people are ready to undergo treatments, but they do not know they can.

Internal communication can be performed as follows:

- In the waiting room and front desk, in which people are educated regarding the message of PCO using videos, audios, brochures, questionnaires, recalls, etc.
- By the team, who is the primary vehicle of the message, performing actions aimed to increase the awareness of people regarding the positive effects of PCO.

External communication can be performed as follows:

- On the outdoor sign, which should contain a clear message of PCO.
- Using social media to share inbound educational contents to increase the awareness of lay people about the problem that can be solved by orthodontics.
- Using blogs, in which all information pertaining to PCO can be published by incorporating a proper copywriting style.
- On websites with well-constructed SERP and reputation, in which the message of PCO is well explained, the team is introduced, and useful information may be found.
- Using mass media such as newspapers, magazines, television, and radio, by which the message of PCO can be shared to explain the role of orthodontics in improving public health and quality of life.

CONCLUSION

To the best of our knowledge, this is the first paper that summarizes the clinical and extra clinical key factors of PCO for achieving orthodontic prosperity in the post-pandemic era. Considering that PCO requires a well-structured organization, primarily of human resources, and clinical/extra clinical skills, ACO cannot be the key for achieving prosperity in the upcoming future. Therefore, the entire scientific community should implement training campaigns with a 2-fold objective: (1) To raise awareness in lay people about the potential of orthodontics and the role of the orthodontists in improving their health and (2) to train orthodontists for facing future organizational challenges in achieving the desired prosperity, including patients and orthodontic treatment staff as well as the dealer companies.

REFERENCES


