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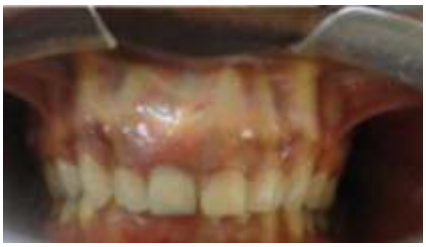
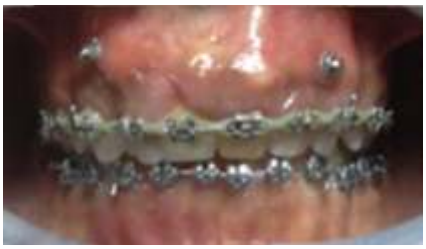
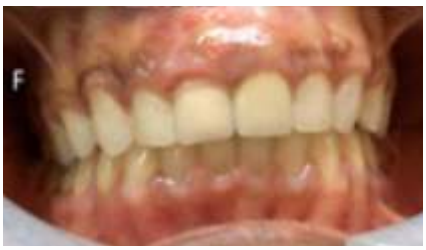
Oral Health Behaviour and Compliance of Nigerian Adolescents to Orthodontic Treatment



Occlusal Relationships in the Primary Dentition of Senegalese aged 5-6 years



Evidence-based Orthodontic Practice in Nigeria



Strategic Advantage for Sustainable Success in Orthodontics

CASE REPORT
Management of a Severe Gummy Smile with TADs

OFFICIAL PUBLICATION OF ORTHODONTIC ASSOCIATIONS IN THE WEST AFRICAN SUB-REGION
"DENTISTRY'S FIRST SPECIALTY JOURNAL IN SUB SAHARAN AFRICAN"

Strategic Advantage for Sustainable Success in Orthodontics

Ernest MA

Abstract

Background: The greatest challenge facing us as Orthodontists is living the new normal life post–COVID-19. How do we deal with our own safety and patient safety? How do we handle possibly low patient load due to economic downturn and the fear of contracting infection in clinics? The cost of using PPE and redesigning our clinics, who bears them? Orthodontic services is almost nonexistent in primary health care and very low in secondary health care facilities in Nigeria. There is also inadequate financing of quality health services and inefficiencies abound in the provision of health care services, particularly in the public sector; paucity of local / international Orthodontic grants. Generally low quality of health services still abound in both public and private health facilities, low coverage and gross inefficiencies in the national health care delivery system. To achieve increasing coverage of Orthodontic services, there is the need to employ improvement planning tools for a turnaround in the next couple of years. These tools are discussed in this review.

Methods: Useful tools for improvement planning discussed in this review include SWOT Analysis, Gap Analysis, Goal setting, Paradigm shift and Six Sigma.

Results anticipated: We expect a shift from Face mask/ Gown to full Personal Protection Equipment (PPE), from Analog record keeping services to Digital services, from long treatment time to contracted treatment time, from low aligner patient load to high aligner patient load and from waiting for Patients to come to us in the hospital to going to them in the communities. A shift is also expected from contracted training programmes to liberalised training, from 'out of pocket' financing to National Health Insurance Scheme, from limited coverage to universal coverage and radical shifts from face-to-face consultation to Tele-Orthodontics.

Conclusion: It is concluded that by employing appropriate tools, Orthodontic practices can be well-positioned now and higher coverage achieved in the immediate future.

Keyword: Post-COVID-19 practice, Improvement Planning, Orthodontic coverage.

ORIGINAL ARTICLE

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Introduction

Sustainable Healthcare is that which contributes to survival and full potential development that can be delivered cheaply to the vast majority of the population, over a long period of time with improving quality and performance. It is "A complex system of interacting approaches to the restoration, management and optimization of human health**.** It has an ecological base that is environmentally, economically, and socially viable. The system works harmoniously with the human body and the non-human environment, and does not result in unfair or disproportionate impacts on any significant contributory element of the healthcare system". [1]

Orthodontic health care services involve clinical services, training, referral, research, career progression, staff welfare and futuristic planning. A sustainable health care system is achieved at the interception of environmental, social, and economic factors as seen in the figure below[2].

Figure 1: Sustainable Health and Care System

Focus

The aim of this article is to define sustainable orthodontic healthcare, review major services in orthodontic healthcare, assess the present status of orthodontic practices in the Nigerian health sector. Another aim is to make a list and discuss major tools needed to achieve sustainable success in Orthodontics care and project future Orthodontic care in ost-COVID Nigeria.

The Current situation

Orthodontic services is almost nonexistent in primary health care and very low in secondary health care facilities in Nigeria [3,4]. There is also inadequate financing of quality health services; paucity of local / international Orthodontic grants, and inefficient provision of health care services, particularly in the public sector . A generally low quality of health care services still abound in both public and private health facilities, as well as low level of coverage in the national health care delivery system[4]. Inefficiencies abound in the Laboratory technology- human and material resources, aligner technology, CAD-CAM.
Currently, the greatest challenge facing Orthodontists is living the new normal life post - COVID. How do we deal with our own safety and patients' safety? How do we handle possibly low patient load due to the current economic downturn and fear of contracting infection in our clinics? The cost of using PPE and redesigning our clinics, who bears them? How do we make the transition from analog to digital technology in record keeping and other areas of service? How do we maintain/increase our relevance and keep the cutting edge? These are questions seeking practical answers. There is therefore the need to look at various improvement planning tools and examine how they can be utilized.

Tools for Improvement Planning

Improvement planning can be at different levels; personal, family, community, organizational, national or global. For example; the recently introduced World Orthodontic Health Day is a global awareness day to improve Orthodontic service utilization. Let us take a quick look at some specific tools useful for improvement planning. These tools include SWOT Analysis, Gap Analysis, Goal Setting, Paradigm shift, and Six Sigma. Especially now, with the advent of COVID-19, there is a need for a personal improvement plan to be adopted as Orthodontists.

1. SWOT ANALYSIS

SWOT stands for S-strengths, W-weaknesses, O-opportunities and T-threats. This tool helps to examine each outlined area at either personal or organizational level. In practice, a Quadrant is constructed to host an item list for each area of SWOT as seen in figure 2 below.

S - Strength 1. 2. 3.	W - Weakness 1. 2. 3.
O - Opportunity 1. 2. 3.	T - Threats 1. 2. 3.

The expectation is to visually see and mentally prepare to strengthen the areas of Strength, pay attention to the Weaknesses, take up and utilize the Opportunities and guard against the Threats.
For Orthodontic practice in Nigeria, a strength includes a large market accentuated by a few number of Orthodontists, a weakness is the poor economy that makes people focus on life-threatening illnesses alone, an opportunity is a growing population of young people who are very much concerned about the facial aesthetics, and a threat is the increasing cost of materials due to high foreign exchange rate, and quackery in practice.

2. GAP ANALYSIS

Gap analysis promotes an awareness of Quality Management System among all stakeholders. It brings a culture of continuous improvement to an

organization. At the personal level, it helps to assess where you are and where you want to be and what you need to get there, by itemizing the Gap. The Gap may require attendance at a workshop, conference, or acquiring a new Orthodontic skill e.g. digital technology.

Whereas in the organizational Gap analysis market model, there is the need to evaluate cost-effectiveness by asking how economical the product is?, assess prestige by asking how well-known the product is ?, assess awareness by asking how well-known or 'loud' is the product?

Orthodontists, therefore, need to assess and analyze how to fill gaps such as the knowledge/awareness gap, technology gap, and policy gap, which requires the involvement of the government. Effective internal audit programmes that will allow practitioners to measure themselves against the Standards,5include a periodic assessment of patient load, effectiveness of outreach programmes, periodic assessment of infection control, and staff/ patient safety, especially with the COVID – 19 new normal world. Orthodontists also need to assess availability of resources (space, personnel, supplies, skill) and periodic assessment of treatment outcomes, relapse rate, and research (number of publications, randomized control trials and research grants).

3. GOAL SETTING

Goal setting is the process of determining and writing down one's expectations, developing and carrying out action steps for achieving different stages of the expectations without looking back until done. As an association, orthodontists need to set up a think tank for goal setting in order to remain relevant. Where are we and where do we want to be next? What is our mission statement? What is our vision statement? What are the association's 5 year / 10year goals? They may not be written in stone but must get refined on a continuous basis.

4. PARADIGM SHIFT

Paradigm is defined as a set of rules and regulations that guide a group. It determines success or failure and creates boundaries within which members have to act or behave. Paradigm may also mean the way people see their world. When a paradigm works well, progress or great success can be achieved. When success plummets, then a shift to another paradigm will be necessary to sustain the success or achievement. There is therefore the need for paradigm shift at intervals to keep tract with global best practices and sustain achievements. There is a need to answer such questions as: How do we practise Orthodontics post- COVID-19? What is the new normal for Orthodontic services? What innovation would we like to introduce to Orthodontics in the next 12 months? What is there to stand against us in the next 12 months? How can we overcome and make the needed change?

There is therefore the need for Orthodontic paradigm pioneers and shifters to bring the needed change through brainpower, research findings, and sharing experiences. Possible shifts in the immediate future should therefore include:

- A shift from face mask/gown to full Personal Protection Equipment (PPE)
- A shift from analog record keeping services to digital services
- A shift from long treatment time to contracted treatment time.
- A shift from low aligner patient load to high aligner patient load.
- A shift from waiting for patients to come to us in the hospital to going to them in the communities
- A shift from contracted training programme to liberalised training
- A shift from out of pocket financing to National Health Insurance Scheme (NHIS)
- A shift from limited coverage to universal coverage {Primary Health Care [PHC]}
- A shift from Face to face consultation to Tele-Orthodontics

Developing and sustaining tele-orthodontics in Nigeria requires a multi-sectoral collaboration between health and ICT professionals and intra-professional multi-disciplinary approach 6,7. How to handle the issue of confidentiality, security, privacy, professional responsibilities, medical records and research using patients information, professional commitment and ownership, handling professional resistance, and personnel issues must be well planned. Finance is a major stake in sustainability, as such, funding would have to come from government,

NGOs, bilateral, and multilateral organizations. There is also the need to utilize the principle of private- public partnership. Service users should be made to show financial commitment through taxes, out-of-pocket payment, and pay-as-you-use (PAYU).

SIX SIGMA

This is a tool designed to reduce anything that will cause customer dissatisfaction. It started as a means to reduce production defects to the minimum and promote highest consumer satisfaction. It is based on producing products with minimal defects8. The goal of Six Sigma is better delivery, better quality, satisfied employees, and satisfied customers (patients). One Sigma defect would be 69.1% whereas at Six Sigma defect is reduced to 0.00034% of all the products (Table 2).

Six Sigma (6S)

Sigma	% Good	% Defects	DPMO
1	30.9%	69.1%	691,462
2	69.1%	30.9%	308,538
3	93.3%	6.7%	66,807
4	99.38%	0.62%	6,210
5	99.977%	0.023%	233
6	99.997%	0.00034%	3.4

Table 2: Levels of defect as you improve from One Sigma to Six Sigma8

The Peer Assessment Rating (PAR) index9 was developed to provide a quantitative objective method of measuring malocclusion and efficacy of treatment. Previously published personal audits suggest that, to achieve a good standard of orthodontic treatment, the mean reduction in the PAR score should be greater than 70%. Alternatively, the number of patients falling into the 'Worse or no different' category should ideally be less than 5%. This is a good tool that can be used consistently to assess the quality of finished cases and the improvements made. Excellently finished cases are the products of Orthodontists.

As such, practitioners must aim at:

- Eliminating or reducing relapse
- Finished cases meeting defined criteria.
- Developing treatment techniques that will improve outcomes
- Reducing treatment time to barest minimum
- Reducing wastage- bracket failure due to iatrogenic factors ie poor bonding technique
- Ensuring safety of self, staff, and patient.
- Increasing productivity

Conclusion

The current challenge is the future of Orthodontics in the new normal world. However, post COVID 19 is not the problem but how it is viewed . How do we turn the challenges of COVID 19 around to becoming great opportunities for the profession? Presently, orthodontists are serving less than 1% of the population4. How do we increase coverage? How do we operate Economic - Status based Orthodontic services in order to cover a large percentage of the population? How do we design new treatment models with reduced treatment time? How do we have access to equipment and new technologies that will remove viruses from clinics and keep the air safe to work long hours and perform aerosol generating procedures?

The success game plan of the Orthodontic practice is to move from struggling to surviving and from there to stability which has been achieved. There is a need to now move to the level of good success and ultimately to the level of significance. This will only be achieved by working as a team and being focused on utilizing the improvement plans discussed in this research.

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Conflict of Interest

None declared

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