

## EDITORIAL

# The Imperative of Comprehensive Treatment Planning in Dentistry: A Global and Pakistani Perspective

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Received: 15-06-2026

## Introduction

Dentistry has shifted from a procedure focused profession to a patient centred, preventive, and interdisciplinary discipline. In this evolving landscape, comprehensive treatment planning is not simply a way to organize care; it is the foundation of predictable, ethical, and sustainable dentistry. The dentist must look beyond individual teeth and procedures to consider overall oral health, disease risk, function, esthetics, patient expectations, and long-term maintenance.

Comprehensive treatment planning begins with accurate diagnosis and risk assessment followed by treatment sequencing, interdisciplinary coordination, definitive rehabilitation and maintenance. Its principle is care: the objective is not only to treat current problems but to anticipate future risks and preserve oral health over time.

## A Global Imperative

Worldwide, dentistry is moving towards evidence-based, minimally invasive and interdisciplinary care. The emphasis on Minimum Intervention Oral Care (MIOC) reflects this shift, promoting prevention, early diagnosis, disease control, minimally invasive treatment and ongoing surveillance rather than repeated restorative interventions<sup>1, 2</sup>. Comprehensive treatment planning is not about doing more treatment; rather, it provides a framework for determining what treatment is necessary, when it should be provided and what can be avoided.

Interdisciplinary collaboration is equally important. Complex cases often require coordinated input from periodontics, endodontics, orthodontics, oral surgery, implantology and prosthodontics. This collaboration should begin at diagnosis and planning and not after complications arise. In prosthodontic rehabilitation especially, periodontal health, endodontic status, occlusion, tooth prognosis, implant position and aesthetics must be considered together to achieve predictable long-term outcomes.

Digital dentistry is also transforming treatment planning. Intraoral scanning, CBCT, CAD/CAM, digital photography and artificial intelligence increasingly support diagnosis, communication and treatment execution. However, technology should remain an adjunct to clinical judgement rather than a substitute for it. The success still depends on the clinician's ability to integrate clinical evidence with patient-specific needs and expectations.

## Results:

These principles are particularly relevant in Pakistan, where patients often present with advanced or multiple oral health problems and where access to specialist services and technology varies widely. Comprehensive treatment planning can help clinicians prioritise urgent needs, control disease, preserve strategically important teeth and provide rehabilitation within realistic financial and clinical constraints.

Importantly, comprehensive care does not necessarily require sophisticated technology. In resource-variable settings, careful clinical examination, appropriate investigations, diagnostic reasoning, treatment sequencing and effective patient communication remain fundamental. Technology should be adopted where it improves diagnosis, predictability or patient care, rather than simply because it is available.

The need to strengthen comprehensive treatment planning is also evident in dental education. The Pakistan Medical and Dental Council's National Registration Examination syllabus recognises patient assessment, diagnosis and treatment planning as core competencies<sup>3</sup>. However, the ability to formulate and justify a comprehensive plan should extend beyond examination and become an integral to undergraduate and postgraduate training. Prosthodontic education, in particular, should emphasise case analysis, prognosis, sequencing, interdisciplinary consultation and long-term maintenance alongside technical skills.

Digital dentistry presents both opportunities and challenges for Pakistan. Although awareness of digital technologies is increasing, their clinical adoption remains limited by cost, infrastructure and training<sup>4,5</sup>. The digital transformation of dentistry must, therefore, be accompanied by education and institutional support rather than being viewed solely as an equipment-related issue.

Pakistan does not need to replicate models of comprehensive care developed in high-income countries. Instead, it requires a context-sensitive model that combines international evidence with local realities. Such a model should prioritise:

- accurate diagnosis and risk assessment
- prevention and disease control before definitive rehabilitation

- prognosis-based treatment planning
- interdisciplinary management of complex cases
- phased treatment according to clinical priorities and patient circumstances
- appropriate adoption of digital technologies
- structured maintenance and long-term follow-up.

The goal should be a transition from reactive, procedure-based dentistry to proactive, patient-centred oral healthcare.

## Conclusions

Comprehensive treatment planning represents a change in professional thinking—from treating individual teeth to managing patients, from isolated procedures to integrated care, and from episodic intervention to lifelong oral-health management.

For Pakistan, this should become more than an examination requirement or specialist aspiration; it should be regarded as a core standard of contemporary dental care. The future dentist must be equipped not only to restore what has been lost, but also to anticipate disease, preserve biological structures, coordinate treatment and maintain health over time.

Ultimately, the success of modern dentistry should not be measured by the number of procedures

performed or the sophistication of technology employed, but by the appropriateness, longevity, sustainability and patient-centredness of the care delivered.

## Conflict of Interest

There is no conflict of interest to declare.

## Financial Disclosure

There are no sponsors for this research; it is self-sponsored.

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