

## ‘CURRENT TRENDS’ IN DENTAL COMMUNICATION - A NARRATIVE REVIEW.

**Dr. B. Lakshmanarao<sup>1</sup>**

<sup>1</sup>Prof & HOD, Dept of Prosthodontics, Lenora Institute of Dental Sciences, Rajahmundry, Andhra Pradesh, India.

Corresponding Author: Dr. B. LakshmanaRao

Mail: kushulubathala@gmail.com

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### ABSTRACT

Successful diagnosis, treatment planning, and patient satisfaction all depend on prosthodontists and patients having effective communication. In prosthodontics, the landscape of patient-provider relations has changed dramatically in recent years due to technological breakthroughs. Patients' comprehension of intricate treatment plans has improved with the use of digital technologies like Digital Smile Design (DSD), 3D intraoral imaging, CAD/CAM simulations, and teleconsultations, especially in full-mouth rehabilitation and implant therapy. Additionally, mobile health apps, chatbots powered by artificial intelligence (AI), and augmented reality (AR) have enhanced post-treatment instructions, appointment scheduling, and real-time communication. Comparative research has demonstrated that, in many respects, technology-based communication surpasses traditional approaches in improving patient involvement, trust, and treatment acceptance. But there are still issues, especially with relation to data protection and senior patients' computer literacy. It seems that the greatest patient-centered approach is provided by a hybrid model that blends individualised in-person interactions with cutting-edge digital communication tools. In addition to meeting the needs of contemporary dentistry, these advancements open the door for prosthodontic patients who are better informed, more involved, and happier.

### 1. INTRODUCTION

In prosthodontics, diagnosis, treatment planning, and patient satisfaction have always depended on effective communication. New technologies in the digital age have changed the way prosthodontists communicate with their patients, bringing with them both new possibilities and difficulties.

#### 1. Evolving Communication Channels

Modern patients expect multichannel communication, including: Teleconsultations for first conversations or post-operative evaluations, emails, SMS, and applications for appointment reminders and follow-ups, Social media sites for interaction and education. [1]

**2. Visual and Digital Tools for Enhanced Understanding-** Dental patients frequently have trouble visualising the results. Digital tools like as 3D imaging and intraoral scanners for patient-friendly visual aids, digital smile design (DSD) software to replicate aesthetic outcomes, and augmented reality (AR) to improve patient comprehension are helpful. [2]

**3. Patient-Centered Communication and Education-** The focus of contemporary dental care is on collaborative decision-making. This calls for: Digital treatment plans and films that are simple to understand, Personalised content sent by email or apps, Online permission forms with explanations in multiple languages.[3]

**4. Data Security and Ethical Concerns-** Maintaining patient anonymity in telecommunication, utilising secure cloud storage for medical information and photographs, and making sure data exchange platforms comply with HIPAA are all obligations that come with digital communication.[4]

**5. AI-Powered Chatbots and Virtual Assistants-** AI chatbots are used by some clinics for the following purposes: answering questions around-the-clock, booking appointments and initial triage, and gathering medical history prior to clinical visits. Dentists in the digital age must embrace technologically advanced communication strategies that honour patients' demands for convenience, information, and involvement in their treatment. When used carefully and securely, technologies like AI, digital visualisation, patient portals, and teleconsultation can greatly improve the patient experience. [5]

#### Recent Trends in Communication with Dental Patients

**1. Teledentistry** - video consultations for follow-ups, treatment planning, and preliminary assessments. Particularly helpful for people who are elderly, have health issues, or live far away. made possible by safe platforms such as Doxy.me and Zoom for Healthcare. [6]

**2. Digital Smile Design (DSD) and Interactive Visualization-** enables patients to envision aesthetic results prior to beginning therapy. increases patient confidence and collaborative decision-making. combines facial analysis, 3D scanning, and digital photography. [7]

**3. AI Chatbots and Virtual Patient Assistants** - used to schedule visits, gather preliminary data, and offer prompt responses to frequently asked questions. accessible around-the-clock, boosting engagement and convenience. decreases chairside time and enhances productivity. [8]

**4. Mobile Health Apps and Patient Portals-** Through specialised apps, patients can receive treatment plans, education materials, instructions, and reminders. Real-time progress tracking and communication with the prosthodontist are made possible by certain systems. [9]

**5. 3D and AR/VR for Patient Education-** Patients can examine 3D models of their own oral anatomy or prosthesis using AR/VR tools. aids in the explanation of difficult procedures like implant placement or full-mouth rehabilitation. lowers anxiety and improves understanding. [10]

**6. Social Media and Online Reviews-** For case studies, patient endorsements, and raising awareness of oral health, dentists use social media sites like Facebook, Instagram, and YouTube. Before selecting a prosthodontist, patients frequently conduct internet research. When done ethically, it increases engagement and trust. [11]

**7. Personalized Video Messages and Digital Consent-** For patients to watch at home, dentists produce customised video explanations of treatment options. Interactive components, such as films, animations, and quizzes, are now incorporated into digital permission forms to guarantee informed consent. Static spoken explanations are giving way to interactive, graphic, patient-driven methods in dental communication today. Particularly among patients who are tech-savvy, these trends not only improve comprehension and satisfaction but also increase trust and compliance. [12]

#### Conventional vs. Technology-Based Communication in Prosthodontics

**Conventional Methods-** Face-to-face verbal discussions. Printed brochures and diagrams. Manual consent forms. Intraoral examination with physical models or wax-ups.

**Technology-Based Methods-** Digital Smile Design (DSD), 3D imaging and CAD/CAM simulations.

**AI-powered treatment explanations-**Teleconsultations and virtual follow-ups

#### Augmented reality (AR) and mobile apps

1. Patient Comprehension and Satisfaction randomised controlled study contrasting traditional communication methods with digital visualisation (3D models). The digital group's understanding of available treatments was noticeably better. reduced anxiety and increased contentment. Digital technologies improve patient comprehension, particularly when it comes to intricate prosthodontic procedures. [13]

#### 2. Shared Decision-Making and Trust

Patient participation in decision-making increased as a result of digital simulations. Patients expressed greater trust in the suggested strategy. Visuals based on technology enhance case acceptance and foster trust. [14]

#### 3. Communication Efficiency and Follow-up

With fewer in-clinic visits, patients were able to understand implant and denture treatments more quickly. App-based instructions and smartphone reminders enhanced follow-up communication. Digital platforms can improve continuity of service while cutting down on chair time. [9]

#### 4. Limitations of Technology-Based Methods

Face-to-face, analogue interactions are still preferred by some elderly patients or those with restricted access to technology. Danger of information overload due to jargon or extremely intricate graphics. reliance on internet access and appropriate instruction. [15]

#### Which Is Better

| Criteria                       | Conventional | Digital/Technology-Based  |
|--------------------------------|--------------|---------------------------|
| Patient understanding          | Moderate     | High                      |
| Visualization of treatment     | Basic        | Advanced                  |
| Trust and decision-making      | Moderate     | High                      |
| Accessibility for all patients | High         | Variable (tech-dependent) |

| Criteria                 | Conventional | Digital/Technology-Based |
|--------------------------|--------------|--------------------------|
| Follow-up and engagement | Limited      | Enhanced                 |

## 2. CONCLUSION

With the use of digital technologies, the communication landscape for dental patients is changing quickly. Digital Smile Design, 3D imaging, teleconsultation, and AI-based platforms are just a few examples of the tools that have greatly improved patient comprehension, engagement, and pleasure. More participation in decision-making, more effective follow-up, and a clearer visualisation of treatment outcomes are all made possible by these developments. But even with these advantages, in-person contacts are still valuable, especially for patients who might not be as tech-savvy. Therefore, a hybrid strategy that strikes a balance between the efficiency and clarity of digital technologies and the personalisation of traditional approaches is the way of the future for dental communication. Better treatment outcomes, deeper patient-practitioner relationships, and increased therapy acceptability can result from carefully embracing these developments.

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