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Transforming Prosthodontic Practices: Embracing Digital Technology

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Abstract
Prosthodontics is undeniably evolving, consistently showcasing innovation, expansion, and progress across various dimensions of the field. Dental specialists, particularly DentoProsthethic professionals, can improve their workflow by using digital technologies in their practices. Therefore collaboration with dental laboratories is made easier and more efficient.
The most recent advancement focuses on the broad application of digital technologies to improve patient experi ences and the standard of treatment. This study outlines the role of digital technology in prosthodontics and elaborates on the A-Z of digital prosthodontics, such as digital radiography, digital impressions, virtual articulator and facebow, computer-aided designed restorations, Digital smile designing, digitalized dentistry in occlusal correction, electronic prescriptions, computerized case presentations, digital technology in fixed implant prosthodontics, and shade selections, with an accent on the benefits of digital prosthodontics.
Keywords: *digital prosthodontics, digital technologies, rapid prototyping, prosthodontics, digitalized Implant dentistry.*

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I. Introduction

On several fronts, the dental profession is always demonstrating innovation and development. Recent advancements in dentistry have included the use of digital technology in many ways to improve the quality of care and patient experiences. Dentistry can be traced back to the eighteenth century when impressions required the use of waxes and plaster of Paris [1], and dental equipment comprised of hand-driven and then water-driven motors. Since then, there has been a long path to acquire the current paraphernalia.[2,3,4]

Prosthodontic improvements are now focused on the digitization of workflow employing a wide range of technologies. The digital revolution is altering workflow and operating procedures in dentistry, especially in prosthodontics.[5,6]

With the debut of digital radiography and the first versions of intraoral scanning and computer-assisted design and computer-assisted manufacture (CAD/CAM) crowns in the early 1990s, widespread adoption of digital technology in dentistry started.[7] The advent of cone beam computed tomography (CBCT) ushered in a new period of excitement, as three-dimensional scans of the craniofacial area provided new benefits in diagnoses and therapy.

In 2025, significant advancements in digital technology have enhanced the precision, efficiency, and customization of prosthodontic treatments. Noteworthy innovations include AI-driven treatment planning with 3Shape Automate, which accelerates the design of crowns and bridges, ensuring faster and more consistent outcomes. The SprintRay MIDAS system transforms in-office 3D printing, enabling the rapid production of same-day restorations with exceptional accuracy. Furthermore, the development of haptic bilateral teleoperation systems improves operator control and precision during free-hand procedures, potentially enhancing safety and reducing clinician workload. The future of digital prosthodontics will be shaped by advancements in AI-based treatment planning, 3D printing, robotic assistance, cloud integration, personalized biocompatible materials, and augmented/virtual reality, driving greater precision, efficiency, and individualized care in dental restoration.

This review focused on recent clinical studies, reports, and techniques involving the use of digitalization for patients requiring prostheses, intending to provide an up-to-date overview of the corresponding advances in the field of prosthodontics, as well as the benefits and drawbacks of this new technology.

Overview of Digitalization in Prosthodontics

Digital technology has significantly transformed the field of dentistry, revolutionizing various aspects of dental practice. Some key applications of digital technology in dentistry include:

1. **Digital Radiography**: Digital or electronic imaging has been available for over a decade. Dr. Frances Mouyens invented the first direct digital imaging system, Radiovisiography (RVG), which was manufactured by Trophy Radiologie (Vincennes, France) in 1984 and published in the US dental literature in 1989.[8] CBCT is commonly used to diagnose injuries, pain, dysfunction, fibro-osseous ankylosis, condylar erosion, and cysts due to its numerous benefits. CBCT scans the maxillofacial skeleton in 3D using an extra-oral scanner specialized for this purpose. The CBCT unit is the same size as a typical panoramic radiography equipment.[9,10]
2. **Intraoral Cameras**: These small cameras capture high-quality images of the inside of the Oral Cavity, allowing dentists to show patients detailed views of their oral health. This helps in patient education, treatment planning, and monitoring progress.
3. **Computer-Aided Design/Computer-Aided Manufacturing (CAD/CAM)**: CAD/CAM technology enables the creation of dental restorations like crowns, bridges, and veneers with precision and efficiency. This technology can fabricate restorations in a single visit, eliminating the need for temporary prosthetics.
4. **3D Printing**: 3D printers are used to create dental models, surgical guides, and even custom dental implants. This technology allows for personalized treatment solutions and improved outcomes for patients.
5. **Digital Impressions**: Digital scanners replace traditional messy impression materials, providing more accurate and comfortable impressions for restorations like crowns, bridges, and aligners.
6. **Practice Management Software**: Digital platforms streamline administrative tasks, appointment scheduling, patient communication, and electronic health records management in dental practices.
7. **Tele-dentistry**: With the advent of digital technology, remote consultations and follow-ups have become more feasible, allowing patients to receive expert dental advice without physically visiting a dental office.
8. **Tooth in a Day** (also known as "Same-Day Implants" or "Immediate Load Implants"): A concept, facilitated by advanced digital technologies such as CBCT, CAD/CAM, and immediate-load implants, provides an efficient and predictable solution for single-tooth replacement, yielding high short-term success rates, while emphasizing the importance of patient selection and long-term monitoring for sustained clinical outcomes.

These applications of digital technology in dentistry have enhanced diagnostic capabilities, treatment outcomes, patient experience, and overall efficiency in dental practices.

Digital Technologies in Prosthodontics

Digital dentistry leverages a diverse array of technologies to establish a unified platform for the delivery of treatment, documentation, production, and communication. Recent years have seen significant developments in clinical dentistry thanks to advancements in materials, software, and technology.

The most commonly used digital technologies in prosthodontics include [11]

a) Digital Radiography
b) T-scan System (asses occlusion and TMJ disorders)
c) Virtual Articulators and Digital Facebow
d) Digital Study Models
e) Intraoral Scanners
f) CAD-CAM
g) 3-D Printing
h) Joint Vibration Analysis (JVA)
i) Digital shade Analysis
j) Guided Implant surgeries
k) Intraoral Scan Bodies
l) Photogrammetry
m) Computer Guided Navigation System
n) Digital Smile Designing
o) Virtual Reality in Education and Training

Intraoral Scanners and Digital Impressions

Digital Impressions: Digital impressions are far more efficient than traditional impressions. Re-scans save time by merely rescanning missing or unacceptable areas, as opposed to typical impressions that require retaking the entire arch. Additionally, the absence of tray fit, taste, and imprint material setting time improves patient comfort. Digital impressions ensure precise repair fit. Several oral scanner systems are available on the market, such as the ED4, I Tero, and Lava chair-side scanners. These technologies enable dentists to design and mill in the office, while other systems capture impressions for production in a laboratory.

Intraoral Scanners: Digital impressions created with intraoral scanners (IOS) are quickly replacing traditional dental impressions due to advancements in digital technology, and these impressions could potentially be replaced in the next ten years. Intraoral scanners (IOS) are tools used in dentistry to capture optical impressions. They transmit a light source onto the dental arches and prepare tooth surfaces while imaging sensors collect the pictures. In order to ensure an efficient and economical workflow, several dental laboratories use computers to digitally design their restorations after scanning casts or impressions.[11] In 2024 and 2025, advancements in intraoral scanners, such as the Medit i900 with enhanced ergonomics and deep scanning precision, iTero Lumina™ with a wider capture field and faster scanning capabilities, and Planmeca Onyx™ with improved accuracy and flexibility, are driving progress in digital dentistry, optimizing clinical workflows and enhancing patient care outcomes.

Computer-Aided Design (CAD) and Computer-Aided Manufacturing (CAM)

CAD-CAM technology enables computerized milling for dental restorations, including implants, dentures, inlays, and onlays. CAD-CAM is one of the few technologies with widespread use. It offers improved restorative manufacturing compared to dental composites.[12] It is faster, cheaper, more accurate, steady, and precise.

Components of CAD CAM[13]:

a) **Data capture or scanning to capture and record data** about the oral environment (tooth preparation, adjacent teeth, and occluding tooth geometry)

b) **CAD to design** the restoration to fit the preparation and to perform according to conventional dental requirements

c) **CAM to fabricate** the restoration

Digitalization In Various Fields Of Prosthodontics:

Digitalization in prosthodontics includes the use of advanced technologies such as intraoral scanning, CAD/CAM systems, 3D printing, and digital impressions to enhance the design, fabrication, and customization of various prostheses, including complete dentures, removable dentures, and maxillofacial prostheses, improving precision, efficiency, and patient care.

Complete Denture

Complete denture prosthesis is one of the most commonly used methods of rehabilitation for edentulous patients. However, the fabrication of well-fitting complete denture prostheses is quite challenging to master. This complex task involves many steps, such as neutral zone registration, jaw relation record, and selection of artificial teeth. Different aspects relating to the anatomical condition of supporting structures, such as creases on the tongue and lips, movement of soft tissues during function, and occlusion, also need to be considered to achieve the desired results efficiently.

Steps in the fabrication of Digital Complete denture[14]:

Step 1: Trial Denture Fabrication

(1) Trial denture design

(2) Fabricating trial denture

(3) Verifying jaw relation with trial denture

(4) Occlusal adjustment

Step 2: Final Impression

(1) Border moulding

(2) Recording Final Impression

Step 3: Final Denture Fabrication

Conventional Denture Fabrication	
V[illegible]	Diagnostic Impression
Visit 2	Final Impression
Visit 3	Jaw relation and Teeth selection
Visit 4	Teeth Arrangement & Try In
Visit 5	Denture Delivery

Digital Denture Fabrication	
Visit 1	Definitive Impression, Jaw relation & Teeth Selection
Visit 2	Teeth Arrangement and Try In (Optional)
Visit 3	Denture Delivery

Figure 1: Comparative evaluation of conventional and digital complete denture fabrication

Removable Partial Denture

A removable partial denture is an indispensable treatment option for certain situations. Although various materials and techniques were developed in the laboratory dental field, the conventional metallic removable partial denture manufactured by the lost wax technique is still used. This old technique is successful however its inherited drawbacks. The conventional technique is time-consuming, requires multiple steps, and is technique-sensitive. It should be noted that the more steps used, the more errors and ill-fitting dentures are likely.

Steps involved in the fabrication of Digital Removable partial denture:
a) Cast selection and scanning
b) RPD design planning
c) Cast surveying and modification
d) Creation of RPD components
e) 3D printing of the framework

ADVANTAGES	DISADVANTAGES
1. Less Chairside Time 2. Fewer Appointments 3. Biocompatible 4. Higher Mechanical Properties 5. Can Be digitally Archived 6. Better Fit 7. Easier for patients with Gag and Limited Mouth Opening	1. High Cost 2. Steep Learning Curve 3. Aesthetics can vary based on the type of printing

Figure 2: Advantages and Disadvantages of Digitally fabricated Removable partial denture

Electronic Surveyors: Surveying diagnostic casts is a critical step in the design of RPDs. It determines the most favourable path of insertion, identifies suitable guiding planes, and evaluates tissue undercuts. Traditional mechanical surveyors, while reliable, are limited by manual operation and lack integration with digital systems. With the shift toward digital dentistry, electronic surveyors have emerged to enhance diagnostic precision and streamline prosthetic workflows.

Advantages	Disadvantages
Improved accuracy and reproducibility: Digital measurements reduce subjective error and ensure consistent results.	High cost of acquisition and maintenance
Seamless integration with CAD/CAM: Digital data from surveyors can be used directly in designing frameworks for 3D printing or milling .	Learning curve associated with digital software and interfaces
Enhanced communication: Survey data can be shared easily with dental laboratories, reducing errors and improving efficiency	Technical dependence on scanners, computers, and software platforms
Efficient documentation and storage: Digital archiving allows clinicians to maintain long-term records for comparison and future use.	

Fixed Partial Denture

The digitizing accuracy is a major factor, which influences the fit of fixed restoration. Currently, the data acquisition is either performed directly in the patient's mouth (intraoral) or indirectly after taking an impression and fabricating a master cast (extraoral). Regardless of the digitizing mode applied, clinical parameters, e.g. saliva, blood, and movements of the patient, might affect the reproduction of teeth. Intraoral digitization allows the dental care provider to directly obtain the data from the prepared teeth. Thus, taking an impression and fabricating a cast model is no longer necessary.

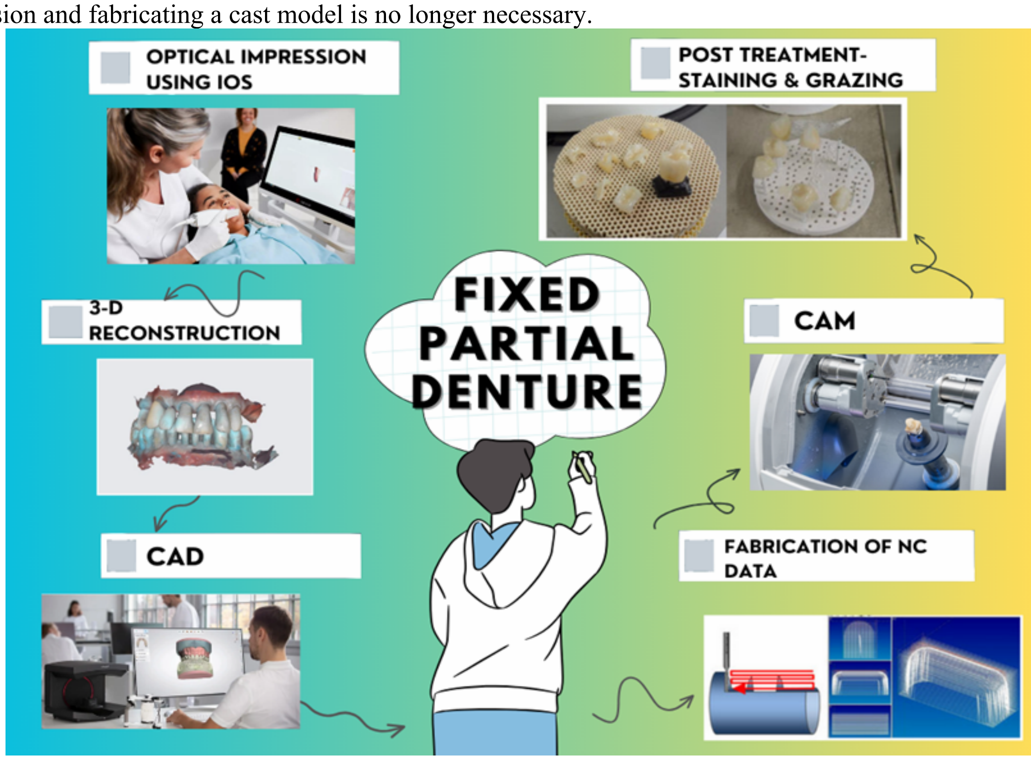

Figure 3: Steps in the fabrication of a digital FPD[15]

Smile Designing

One of dentistry's most challenging dilemmas relates to whether or not we can meet or exceed patients' expectations for treatment in the aesthetic zone. With the increasing demand for highly customized treatment in contemporary aesthetic dentistry, it is paramount to incorporate tools that can strengthen our diagnostic vision, improve communication between team members, and create predictable systems throughout the smile design process and treatment.

Digital Smile Design (DSD) is a multipurpose conceptual protocol that provides remarkable advantages. It strengthens the diagnostic abilities through an extra-and-intra oral aesthetic and structural evaluation, improves the communication between the team members, and enhances the patient's visual perception, education, and motivation, increasing the effectiveness of case presentation and accordingly case acceptance. From the patient's selected meaningful pictures and videos, the DSD ethically involves the patients in the restorative or smile enhancement process, making them the co-authors of their treatment, and sharing objectives, responsibilities, and expectations with the restorative team.

Digital Smile Design is the use of digital images and computer-based manipulation to demonstrate possible changes to the smile and specifically to the position, size, shape, and colour of the teeth and gums. It is a comprehensive cosmetic dental planning tool that uses digital calibration to known dimensions in the mouth to guide the placement of wax during the planning/blueprint or diagnostic wax-up stage. It is then this diagnostic wax-up that is "test-driven" in your mouth before the final smile is delivered.[16,17,18,19]

Dental Implants

Osseointegrated root-form implants became widely used in clinical practice as a tooth replacement option in the late 1980s. After completing several years of clinical study, Professor Branemark observed the modality gain traction in the clinical setting.[20]

SURGICAL GUIDES: If a patient is missing several teeth, a radiographic guide should be worn by the patient during the CBCT scan. The guide allows the practitioner to locate where the future teeth will be restored in space. Radiographic guides can be fabricated in many ways, and one must consider the protocol of the implant planning software one chooses to use.

VIRTUAL IMPLANT PLANNING: The purpose of utilizing virtual implant software is to plan the placement of the implants in prosthodontically-driven positions.[21] Of course an implant may be placed anywhere the bone anatomy allows, but to build a successful prosthesis for that implant, the correct planning must be done.

STEREOLITHOGRAPHIC GUIDES: Stereolithography has become a popular method of fabricating surgical guides.[22] Stereolithography is an additive manufacturing process. This process utilizes a bath of light-sensitive liquid resin which is cured one layer at a time by a laser that traces the 3-D model that the computer demands of it. Stereolithographic guides are very rigid in comparison to conventional resin-cured guides. When restoring a large edentulous area in which the guide has the potential to flex under the pressure of the implant drill, it may be a wise decision to choose a stereolithographic guide so that the implant positions are not compromised.

Digital technologies have significantly improved the assessment of primary stability in dental implants. A customized micromotion detection device, combining a digital micrometer and force gauge, measures the displacement of the implant under controlled loading, offering precise evaluation of micromotion. Resonance Frequency Analysis (RFA), exemplified by the Osstell™ system, provides Implant Stability Quotient (ISQ) values ranging from 0 to 100, enabling non-invasive, repeatable monitoring of implant stability from placement to osseointegration. Additionally, BTI Scan® 4 software enhances diagnostic and surgical planning by offering 3D visualization, bone density mapping, and identification of critical anatomical landmarks, thus improving treatment predictability and patient communication.

Digital Sinus Lift

ROBOT-ASSISTED SINUS LIFT SURGERY: The integration of artificial intelligence (AI) and digital technologies is transforming sinus lift procedures in implant dentistry, offering enhanced accuracy, planning efficiency, and improved patient outcomes. AI-driven software utilizes CBCT imaging to create detailed 3D models, allowing for superior anatomical visualization and virtual implant planning. These technologies support the development of patient-specific surgical guides, which aid in precise drilling and minimize the risk of complications such as Schneiderian membrane perforation. Furthermore, robot-assisted surgery (RAS), though still emerging in dentistry, promises increased precision, reduced surgical time, and improved ergonomics for clinicians.

Key benefits include optimized bone graft quantification, reduced postoperative discomfort, and more predictable implant stability. As AI matures, it is expected to redefine the standard of care in maxillary sinus augmentation.

Despite these advantages, several challenges remain. High costs and limited accessibility may restrict widespread adoption. Data privacy concerns and the need for secure management of patient information are critical. Clinicians must avoid overdependence on AI to preserve core surgical skills, especially in managing unforeseen intraoperative complications. Moreover, the potential for algorithmic bias and the lack of long-term clinical data necessitate further research and careful oversight.

Robotics In Implantology

Robotic systems are revolutionizing implant dentistry by enhancing precision, safety, and efficiency. Robot-assisted systems, such as *Yomi* by Neocis, offer real-time feedback and guided implant placement, improving surgical accuracy. In China, a fully autonomous robot successfully placed implants with a margin of error under 0.3 mm, showcasing the potential of minimally invasive, high-precision surgery.

Additionally, human-robot collaborative systems and telerobotic models are being explored, combining clinician expertise with robotic stability and remote operability. While still emerging, robotic implantology shows significant promise for improving outcomes, though widespread adoption depends on further validation and regulatory support.

Maxillofacial Prosthetics

The primary advantage of the CAD-CAM technique is the virtual 3-dimensional integration of the defective surface with the mirrored and digitalized normal ear. Making an impression of the defective side is not necessary, because only the position of the implants must be recorded to develop the bar for the retention of the prosthesis. This procedure allows the positioning of the ear straight onto the computer screen, eliminating the diagnostic waxing, and the fabrication of the stone mold is not necessary because of the rapid prototyping process.

Furthermore, improved communication between members of the reconstructive team which may include an anaplastologist, surgeon, and maxillofacial prosthodontist is made possible by the digitalization of data pictures. An additional difficulty for extraoral implant-retained prosthesis is the fluctuation in the thickness of the soft tissue above.[23] Digital prosthodontics enhances the design and fabrication of craniofacial prostheses and vaginal stents by utilizing 3D scanning, CAD/CAM, and 3D printing to create highly accurate, patient-specific devices. These technologies improve fit, functionality, and aesthetics, ensuring better comfort, precision, and treatment outcomes.

Digitalization in tongue track pad creation involves the use of 3D scanning, CAD/CAM systems, and advanced imaging technologies to capture precise anatomical details of the tongue and oral cavity. This allows for the design and fabrication of highly customized tongue track pads, which are used in various prosthodontic treatments, such as speech or swallowing therapy. The digital approach enhances accuracy, reduces production time, and improves patient comfort and treatment outcomes compared to traditional methods.

The manufacture of bionic organs, such as bionic ears and eyes, by 3-D printing, is one of the most recent developments in the field of digital maxillofacial prosthetics.

Nanotechnology In Prosthodontics

Nanotechnology has revolutionized digital prosthodontics by enhancing material properties, precision in manufacturing, and prosthetic longevity. The integration of nanoparticles into dental materials, such as nanocomposites and nanoceramics, has resulted in restorations with improved mechanical strength, wear resistance, and aesthetic properties. Nanocomposites improve the durability and strength of materials used in crowns, bridges, and veneers .[24] Nanoceramics, known for their high translucency and strength, provide more natural-looking restorations .[25]

Nanotechnology also plays a crucial role in improving the surface properties of dental materials. Anti-bacterial nanocoating's on dental implants reduce bacterial colonization, which lowers the risk of infections .[26] Nanoparticles in dental adhesives enhance bonding strength between restorative materials and the tooth surface, which contributes to the longevity of dental restorations .[27]

Moreover, the use of nanomaterials in CAD/CAM systems allows for the precise fabrication of dental prostheses. This results in better-fitting restorations and reduced need for adjustments .[28] Nanotechnology further improves the optical properties of dental restorations, providing better color matching and translucency. [29] Additionally, it enhances wear resistance and biocompatibility, ensuring that prostheses are durable and safe for long-term use in the oral cavity .[30,31]

Training And Education Challenges

Learning can be described as functional changes in behavior or mechanical changes in the organism as a result of experience. In a classroom, information typically goes in one direction, resulting in passive learning. However, modern educational practices necessitate the development of more active learning through interactive technology.[32] The transformation of learning has become a crucial aspect of health education. Anatomy is one of the specializations that has benefited the most from augmented reality, allowing for live learning via visualizing interior structures.[33]

During preclinical dentistry education, instructors provide guidance and evaluate students' work before proceeding.[34] Students typically receive comments from teachers at the end of the procedure. However, delayed input may lead to errors being overlooked.[35,36,37] VR-AL allows students to learn more quickly and conduct more exercises than traditional systems. It also provides regular internal evaluation, reducing the time required for instructor assessments.

Artificial Intelligence And Machine Learning

It has been verified that the changes in all fields of dental education are so extensive that their curriculum must be extensively changed to the numerous AI applications. AI ChatGPT enables tailored and effective communication between healthcare providers and patients, analyzing patient texts for problems and sentiment. AI-powered language models can personalize patient-physician communication and automate processes often handled by copywriters or office personnel. [38] However, the study indicated that the AI Midjourney required further development to provide thorough educational materials or graphics, as it requires knowledge of human anatomy.

Artificial intelligence is radically changing two major fields of dentistry education. Theoretical dental education is more advanced in AI application than practical/clinical education, making it ideal for curriculum changes. Generative AI's short-term influence in dentistry is often overstated, but its long-term effects on dental education are significantly underestimated.

Virtual And Augmented Reality In Prosthodontics

There are three primary components to the concept of a virtual patient. Part, one discusses the idea of building electronic health records (EHRs), which are databases including patient medical and dental histories. EHRs are a component of teledentistry, which is characterized as "the practice of diagnosing patients and offering treatment recommendations via video conferencing technologies. "Linking illnesses, symptoms, EHRs, and therapies digitally is the second phase. Therefore, this data may be utilized as a source for research as well as being used to construct electronic case scenarios for training and education purposes. The last section includes a three-dimensional computer-based reconstruction of several human body parts, including the head, neck, and even the full body.[11]

Uses Of Virtual Reality:[11]

1. Preclinical and Clinical training and education
2. Reducing Pain and Anxiety during Dental Procedures
3. Robotic Patients for Simulation

Augmented Reality:

A variant of virtual reality (VR) is called augmented reality (AR). Ivan Edward Sunderland designed the "kinetic depth effect" binocular system in 1968 using two cathode-ray tubes. Tom Caudell of the Boeing Company initially defined "augmented reality" as "a technology that superimposes a computer-generated image on a user's view of the real world, thus providing a composite view" in 1991.[39,40]

AR has several uses. It serves as a guide to improve comprehension. AR technology is employed in interactive tutoring, diagnosis, and treatment planning in addition to smart learning. Digital radiography, dental scans, orthodontic aligners, oral surgery, computer-aided design–computer-aided manufacture (CAD-CAM) restorations, and implantology are among the many fields in which AR is utilized. To meet dental or prosthodontic demands, AR gathers, computes, and stores information from a variety of sources.[41]

II. Emerging Trends And Future Directions

Digital technologies can be combined with nanotechnology to create and modify nanomaterials and devices for dentistry. Nano-based diagnostic instruments, like biosensors and imaging agents, can identify disease biomarkers with high sensitivity and specificity.[42] Diagnostic instruments generate data that may be analyzed and interpreted using digital technologies. Nanotechnology enables targeted and precise treatment, reducing the need for intrusive treatments.[43] Designing nano-based coatings and tweaking nanomaterials can prevent bacteria and pathogens from growing on dental implants (and evaluate their effectiveness). [44] Nanoparticle imaging enhances digital radiograph resolution with a novel approach. This approach improves oral disease detection and treatment planning.[45] Nanotechnology has contributed to the development of implants with enhanced osseointegration and lower failure rates. Implants can be tailored to match a patient's natural dentition, improving aesthetics.[46] Nanobiotechnology has improved the durability, strength, and aesthetics of dental restorations compared to standard restorative materials.[47] Advancements in technology are predicted to improve the capabilities of dentists and oro-dental surgeons, making the future of digital dentistry bright. AI and ML algorithms are being used to improve diagnostic and treatment planning. Additionally, 3D printing hybrid technology is being developed for regenerative dentistry procedures.[48] As digital dentistry advances, it's important to consider ethical problems.

III. Conclusion And Summary Of Key Findings

Digital dentistry enhances the precision, accuracy, and efficiency of dental procedures, leading to better patient results. Digital dentistry has transformed patient treatment by improving precision, efficiency, and accessibility. Advancements in imaging, CAD/CAM technology, 3D printing, and regenerative dentistry have revolutionized the dental profession. AI augmented reality, and tele dentistry have the potential to improve digital dentistry capabilities. The future of digital dentistry seems vibrant with new technology and ideas constantly surfacing and progressing. As digital technology becomes more prevalent in dentistry, dental professionals must stay current on innovations and ethical implications. Adopting new technologies and techniques may involve additional training and expenditure, so weigh the benefits and costs before making changes to dental practice. When incorporating digital dentistry into dental practice, it's important to consider patient needs and available resources. Continued research and innovation in digital dentistry will enhance dental professionals' capabilities and benefit patients.

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