

Digital Dentistry in Implantology

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Abstract

Digital dentistry is the term used to describe the various modalities of dental treatment workflows that are primarily performed using digital technologies. Several digital methods have been incorporated into dental practice to replace conventional methods and techniques in order to enhance treatment planning and improve the predictability of execution. Nowadays, digital dentistry is considered a complete field of study within dentistry. As with any other field, digital dentistry involves a learning curve that must be mastered before it can be effectively used in clinical practice. Ultimately, the dental professional is responsible for using existing digital tools appropriately for patient treatment. In other words, the fundamental principles of dentistry remain unchanged and must be thoroughly understood by the professional, who can then use these digital tools to enhance the predictability of treatment execution.

Key words:

Introduction

Without a doubt, dentistry is rapidly modernizing and transitioning toward digital technology. In the past, taking dental impressions, fabricating dental models, and assembling laboratory prostheses required a significant amount of time. However, the advent of intraoral scanners, digital radiography, computer-aided design/computer-aided manufacturing (CAD/CAM), 3D printers, and artificial intelligence (AI) software has revolutionized the field of dentistry as we know it today [1].

Additionally, digital dentistry provides improved patient education and communication. Dental professionals can more easily and effectively explain treatment options to patients by using digital imaging and planning tools to visualize their dental conditions. Compared to traditional dentistry, digital dentistry offers numerous advantages, including higher precision and accuracy, shorter treatment times, increased patient comfort, improved teamwork and communication, and enhanced patient education.

By reducing waste, energy consumption, chemical usage, transportation emissions, and paper use, digital dentistry also has the potential to minimize the environmental impact of dental care [2]. Dental clinics can take meaningful steps toward environmental sustainability by implementing digital technologies. Furthermore, digital dentistry benefits both private practices and dental hospitals by improving patient outcomes, increasing efficiency, enhancing communication and patient

satisfaction, promoting collaboration among dental professionals, and improving record keeping.

Digital dentistry has also revolutionized dental education and transformed oral health practices. The integration of digital resources, such as simulation software and virtual reality technologies, into dental schools has significantly enhanced the effectiveness and efficiency of student instruction [3].

In summary, digital dentistry represents a paradigm shift in oral health care, revolutionizing the field and propelling it toward a future of advanced innovations. Through its transformative potential, it empowers dental professionals to deliver high-quality care, enhances patient experiences, and paves the way for a brighter future in dental education and oral health.

Conclusion

In conclusion, the advent of digital dentistry has ushered in a new era of advancement in both oral health care and dental education. Through the use of precise imaging, efficient treatment planning, and personalized restorations, digital dentistry has successfully transformed traditional dental practices. Moreover, the integration of digital technologies has significantly improved patient education, fostering better communication and understanding between dental professionals and patients.



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