Acta Scientific Dental Sciences (ISSN: 2581-4893)

Volume 6 Issue 8 August 2022

Editorial

3D Printing in Dentistry

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Received: June 01, 2022

Published: July 01, 2022

The notion of 3D printing is sweeping the globe. 3D printing has been heralded as a game-changing manufacturing technique. The possibilities are boundless (Used in aerospace, defence, art and design), with medical and dental advancements looking particularly promising. Traditional dentistry laboratories may go the way of typewriters and film cameras if 3D printing continues to advance at its current rate. Drill guides for dental implants, physical models for prosthodontics, orthodontics, and surgery, the manufacture of dental, craniomaxillofacial, and orthopaedic implants, and the fabrication of copings and frameworks for implant and dental restorations are all examples of 3D printing applications. This study discusses the many types of 3D printing technology and their uses in dentistry [1].

3D printers are frequently fairly basic robotic machines from a mechanical standpoint. Without computer-aided design (CAD) software, the device would be useless. CAD software allows items, and even entire assemblies, to be designed in a virtual environment. CAD software is widely used in the fields of industrial design, engineering, and manufacturing, as well as in the dental laboratory; it is even becoming a standard feature in many dental practises.

Applications of 3d printing in dentistry:

- 3D printed dental implants
- Repair/replacement of damaged tooth
- Surgical Guides
- Create an orthodontic model
- Printing of aligner
- Research and Development
- Fabricate crowns, dentures Custom dental mould
- Design and development of surgical tools
- Education and training

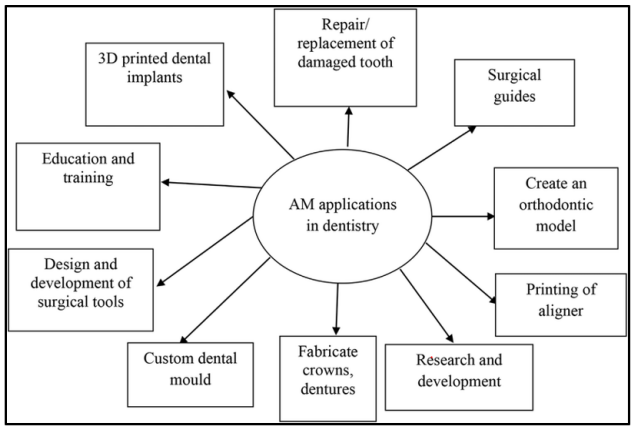

Figure 1: Major 3D printing applications in dentistry [2].

Benefits of additive manufacturing in dentistry

- Faster and accurate service
- Cost-effective
- Determine depth and width of teeth
- Easily fabricate customised implants
- Reduce fabrication time
- With its digital storage, there is considerable inventory reduction of physical models
- Rapidly produce custom design
- Accurate sizing for implants

Conclusion

All elements of dentistry are being impacted by 3D printing and CAD technologies. 3D printing is a boon to dentistry.

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