Digital dentistry in dental prosthetics is growing rapidly in the US

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Despite recovering from a formerly recessed US market, many patients continue to opt away from expensive, elective dental procedures. The market for dental prosthetics, encompassing crowns, bridges, inlays/ onlays, veneers, and dentures has remained relatively stable over the past couple of years. However, eco- nomy products such as monolithic restorations produced with CAD/ CAM technology are driving unit sales.

Digital manufacturing allows laboratories to increase output while decreasing labor costs, permitting them to lower the cost of the final restoration and gain a competitive advantage. A monolithic Zirc- nia crown is priced at around $100, which is $50 less than a zirconia crown fabricated through traditional methods. Patients are choosing the most affordable dental prosthetics, which means monolithic restoration sales will continue to rise. Conse- quently, laboratories and dental offices continue to go digital. In re- sponse, manufacturers of CAD/CAM technology are continuously innovating and releasing new products.

How significant is the trend toward all-ceramic and monolithic resto- rations in driving the CAD/CAM market?

Crowns and bridges total nearly 80 percent of the market of all dental prosthetics in the US. Since 2010, the unit share of all ceramic restorations of crowns and bridges has increased by 20 percent. The most popular cer- amic materials today include zirconia, specifically Glidewell's BruxZir, and lithium disilicate e-max by Ivoclar Vivadent.

Fortunately, for patients, ceramic materials are consistently improving in strength and aesthetic quality, while decreasing in price. Today, zirconia is available in up to 16 diffe- rent shades. The shift to all ceramic restorations is cannibalizing the por- tfolio, significantly increasing the cost of the device receive FDA approval. The denture market is expected to be the fastest growing segment in dental prosthetics over the next ten years. The combination of an aging population and an economic recession is leading patients toward removable dentures, which are more affordable than full implant solutions. Over the next few years, dentures will enter the digital world and be designed and milled with CAD/CAM technology. The manu- facturing process will become faster and more accurate, similar to the way CAD/CAM has transformed the market for fixed prosthetics. Patients will be able to receive their dentures in only two appointments. Further- more, with a permanent digital record of the denture, a broken denture can be fixed quickly.

Currently, unit volume for intra- oral digital impression-taking is ex- pected to grow at a CAGR of almost 20 percent.

As intra-oral digital impression taking becomes more popular with dentists, laboratories will see a great- ter volume of digital files and will be more likely to invest in a CAD/CAM full-in-laboratory system or scanning unit. Therefore, an increasing popu- larity of intra-oral digital impression scanners will help drive the entire CAD/CAM system market and also the market for rapid prototyping systems.

What is the fastest growing market segment?

CAD/CAM technology has moved into dentures. Global Dental Scien- tifics LLC has developed AvaDent Digital Dentures, a complete CAD/ CAM system used to produce removable dentures. Currently, AvaDent is the only firm using the new technol- ogy and laboratories have already expressed interest in buying should the device receive FDA approval. The denture market is expected to be the fastest growing segment in dental prosth- etics over the next ten years. The combination of an aging population and an economic recession is leading patients toward removable dentures, which are more affordable than full implant solutions. Over the next few years, dentures will enter the digital world and be designed and milled with CAD/CAM technology. The manu- facturing process will become faster and more accurate, similar to the way CAD/CAM has transformed the market for fixed prosthetics. Patients will be able to receive their dentures in only two appointments. Further- more, with a permanent digital record of the denture, a broken denture can be fixed quickly.

Conclusion

Ceramic and monolithic restorations will significantly drive the CAD/ CAM market over the long term as patients choose more affordable op- tions. Within this $12 billion market, numbers of intra-oral digital scanners will grow as dentists incorporate new features into their equipment into their practices. Dentures will prove to be the fastest growing market as baby boomers age.

Over the past century, the per- centage of the U.S. population over the age of 65 has more than tripled. In general, mature markets, such as the one for dental prosthetics, tend to grow at a similar rate to the ove- rall economy. Although CAD/CAM technology has been used in the den- tal industry for over twenty years, recent developments are making the technology much more efficient and cost-effective, promising overall market growth.

Additional information

The information contained in this article is taken from a detailed and comprehensive global report series published by iData Research, titled “U.S. Markets for Dental Prosthetics and CAD/CAM Devices.” The Research is an international market research and consulting firm focusing on providing market intelligence for the medical device, dental and pharma- ceutical industries.

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