Newest developments in the European dental prosthetics and CAD/CAM devices segments

Authors: Dr Kamran Zamanian and Ceren Altincekic, Canada

The European dental prosthetics and CAD/CAM devices segments are currently experiencing two opposing forces that will determine the future of these segments. On the one hand, the eurozone crisis is far from being over. Southern European countries such as Spain, Italy and to some extent France are going through an economic downturn, which is delaying dental restorations and slowing down industry growth. On the other hand, the segments are growing at a significant pace owing to technological innovations in restoration materials, CAD/CAM devices such as intra-oral scanners and smaller, but more efficient milling machines. The second trend is expected to trump the first one as countries slowly recover from the economic crises and new technologies revive the market.

All-ceramic and porcelain-fused-to-metal restorations dominate the European dental prosthetics market

All-ceramic restorations are becoming increasingly popular in the European market owing to their aesthetic value. In 2012, the all-ceramics segment grew by more than 5 per cent to constitute a third of all crowns and bridges sold. All-ceramic restorations are expected to approach the porcelain-fused-to-metal share by 2019. Non-precious restorations represent the largest portion of all crown and bridge work owing to their affordability. They will remain at the level of approximately 42 per cent over the next few years. Semi-precious and high-precious materials will be impacted adversely as their biocompatibility and durability are increasingly mimicked by other, less-expensive materials such as cobalt-chromium alloys. Precious metals used in dental restorations, such as gold, have experienced significant price hikes over the last decade. As their utility diminishes, these metals will begin to lose market share in the dental prosthetics segment.

New technologies are beginning to blur the lines that separate different dental restoration materials. Composite materials are becoming more popular, as they combine the most desirable characteristics of their components. New products such as translucent zirconia or hybrid ceramics are promising better value with increased resilience and a more natural look.

Higher demand for these products will drive higher prices for quality dental prosthetics. The price hike will be balanced by increasingly cheaper imports from countries such as China, Taiwan and Morocco. Overall, the dental prosthetics segment in Europe will experience a slight price increase by 2019 owing to better-quality crowns and bridges made of new, more aesthetically pleasing and robust materials.

Intra-oral digital impression-taking scanners becoming more popular in the European market

Intra-oral digital impression-taking scanners are attracting the attention of more dentists and laboratories alike owing to their ease-of-use, non-invasiveness and recent affordability. Newer-generation intra-oral scanners allow dentists to take impressions without the use of powder or paste, which makes the process much faster and less intrusive for patients. Once the impression has been taken, the technician can modify the image as he or she wishes and then send it to a laboratory for milling. The increase in the number of intra-oral scanners in the market is pushing scanner manufacturers to offer open-architecture software that will allow users the freedom to choose the milling centre of their preference. All these aspects of intra-oral scanners make them attractive investments for dental offices and laboratories alike.
Over the next few years, the sales of intra-oral scanners will reach double-digit growth. Dentists will increasingly opt for these scanners instead of chairside systems owing to their affordability and practicality. The prices of these scanners will decrease, making them even more affordable. The average selling price of an intra-oral scanner was a little over €28,000 in 2012, an investment that medium-sized laboratories and dentists can easily afford.

The main competitor in this market is Sirona. The company has over 20 years of experience in the intra-oral scanners segment. Its latest product, the CEREC Omnicam, has introduced a new technology with colour scanning, which allows the dental technician to scan the natural colour of the teeth in 3-D. A similar product was launched by 3Shape at the 2013 International Dental Show in Cologne. TRIOS Color can scan and capture the teeth and gingiva quickly, realistically and in great detail. Intra-oral scanners are evidently becoming the new standard at dental practices.

_CAD/CAM blocks segment experienced double-digit growth_

_CAD/CAM_ blocks had a good year in 2012, despite the lingering effects of the eurozone crisis. Even though block prices have remained stable or dropped owing to increasing competition from Asian companies, the double-digit growth in unit sales largely made up for price cuts, as the segment grew by over 10 per cent in 2012. The growth in the blocks segment has been fuelled by the increase in _CAD/CAM_ system sales, particularly chairside systems. Chairside systems come with a milling machine that mills the restorations from blocks. As sales of chairside systems have increased significantly and will continue to do so up to the end of 2018, the blocks segment has followed that demand closely.

The majority of crowns milled from _CAD/CAM_ blocks on chairside systems are made of all-ceramic material. However, most dental restorations are produced from zirconia because dental laboratories are still the main providers of dental prosthetics. In 2012, zirconia crowns represented over half of the _CAD/CAM_ blocks segment, with the remainder being divided between porcelain and acrylic/composite products. By 2019, porcelain blocks are expected to close the gap, exceeding half of all blocks sold. This trend is consistent with the ever-increasing demand for all-ceramic restorations and the technological developments that make ceramic restorations more resilient and natural-looking than their counterparts are.

_AmannGirrbach and Dental Wings are among the rising stars of _CAD/CAM_ systems segment_

The _CAD/CAM_ systems segment is experiencing new, dramatic trends. Smaller, cheaper and more-efficient milling machines capable of milling a variety of materials are taking their place in laboratories of various sizes and even in some dental offices. AmannGirrbach has made great progress with its motto “the in-house company”, promoting laboratory independence by providing affordable milling machines.

The future of scanner software lies in open systems that create a scan file that can be sent to any milling centre in the world. Dental Wings is making great strides by providing this open-architecture software and affordable scanners to both laboratories and dentists. Through exclusive partnerships with Straumann and 3M ESPE, Dental Wings is aiming at creating common global software for a variety of stand-alone scanners.

Alongside these rising stars, companies like Sirona, 3Shape, 3M ESPE and DeguDent maintain their significant market share in the _CAD/CAM_ systems segment. Sirona is the clear market leader in chairside systems and 3Shape dominates the stand-alone scanners segment, albeit with other competitors such as 3M ESPE, Straumann and Nobel Biocare following closely. The _CAD/CAM_ systems segment is expected to become more competitive as new players emerge and devices become more affordable and efficient.

Editorial note: The information contained in this article is taken from a detailed and comprehensive report published by _iData Research_, titled “European markets for dental prosthetics and _CAD/CAM_ devices”. This report is part of a global series covering Latin America, Asia Pacific and the US.

_about the authors_ _CAD/CAM_

Dr Kamran Zamanian, President & CEO, _iData Research Inc_.
Ceren Altincekic, Market Research Analyst, _iData Research Inc_.

_iData Research_ is an international market research and consulting firm focused on providing market intelligence for the medical device, dental and pharmaceutical industries.