BIZCOMMUNITY

Medical implant sector ripe for 3D printing disruption

Medical technology which is often expensive at the time of market entry becomes cheaper over time. But 3D printing in medicine has started to revolutionise the field, especially with its rapidly declining costs and increased accessibility of the technology.

It is the technology that makes it more cost-effective. Although considerably costlier than existing implant solutions, the precision of end-product is what ensures the success of the 3D-printed medical devices. Because its designed from the thoroughly analysed digital model, 3D implants leave no room for error as compared to the traditional techniques which usually require additional processing adding waste and extraction costs.

With enhanced precision, 3D printed orthopedic and dental implants, including those that are difficult-to-treat have witnessed an impressive success rate in the past half of the decade. In line with this, a Fact.MR market study has estimated sales of medical implant segment to reach over $500m in 2017 and will continue to dominate the market with over two-fold sales.

On-demand

Customisation like any other industry is the current trend in medical implants market. Advances in printers, materials and other technology have enabled manufacturers to design and deliver custom-made, high-resolution 3D-printed implants on patient demand. In orthodontics, digital dentistry based on the 3D system has transformed dentists' service to patients. Starting from designing common dental casting to metal bridges, dental crowns, and other dental implants, 3D printing has made dental implant surgeries better, faster, and cost-effective.

Minimally invasive robotic-assisted surgeries are enhancing the efficiency of 3D-printed medical implant procedures. With the increasing adoption of robotics in the field, rising FDA approvals, and high patient outcomes, the purported growth of the 3D-printing medical devices market at an impressive CAGR of 14.4% during 2017-2022 seems most credible.

The next generation will venture into a combination of 3D bioprinting and tissue engineering to revolutionise organ transplantation.