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Frost & Sullivan: Increasing Demand for Medical Robots in Surgical Disciplines

Medical robots are set to revolutionise surgery with demand particularly high for prostatectomy and hysterectomy minimally invasive surgeries

Surgical robots are becoming more acceptable globally, enhancing the surgeon's abilities with regards to surgical imaging, planning, navigation, and instrument manipulation.

Extensive research is being in this field by market participants in order to further strengthen the capabilities of surgeons through advanced imaging techniques, higher degrees of freedom, haptics feedback, interactive interfaces and teleoperation. Additionally, manufacturers of surgical robots are working on reducing the footprint of established robotic systems and lessening the invasiveness of surgical procedures through the advancement of single port, natural orifice, and swarm robotic technologies.

Findings in Frost & Sullivan's new analysis entitled 'Innovations in Medical Robotics' show that the global surgical robotics market is top-heavy, with the leading participants having cutting-edge technologies and large patent libraries. Furthermore, the industry has an abundance of smaller participants such as companies, spinoffs, and research universities, who are working on innovations in medical robotics.

Stringent regulatory requirements, complex manufacturing processes, and extensive R&D have caused long time-to-market, however surgical robotics technology is now making its way into almost every major surgical discipline.

Technical Insights Research Analyst Geethu Roshan Verghese explained that due to the surgical robots' ability to offer greater accuracy, safety and precision which in turn lead to better clinical outcomes for the surgeon, patient and hospital management, the global demand for surgical robots was especially elevated for prostatectomy and hysterectomy surgeries. Verghese noted that the market would continue to gradually prosper as a consequence of rising awareness, a growing aging population and higher per capita income.

Questions regarding the efficacy of surgical robots have, however, been raised by the lack of randomised trials, appropriate comparison and outcome registries for robotic surgeries. With robust clinical evidence to support the benefits of surgical robots' economic efficiency, improved ergonomics, and reduced surgeon fatigue likely to increase over the next few years, this is considered to only be a restraint in the short run. Companies within the market are also battling this issue by seeking feedback from customers, including hospitals, surgeons and patients.

Verghese concluded by suggesting that market participants use open architecture surgical platforms to promote

collaboration and innovations in surgical robotics in addition to demonstrating the superior efficacy of surgical robotic technologies with the aid of positive data from long-term clinical trials, as this would pave the way for greater investment from universities and research institutions.

Source: Frost & Sullivan

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