

Automated Suturing Devices Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

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Report description:

The Automated Suturing Devices Market is projected to register a CAGR of 9.2% during the forecast period (2023 - 2028).

The healthcare system has witnessed enormous challenges as a result of the COVID-19 pandemic. All outpatient treatments were postponed or restricted during the COVID-19 pandemic to reduce the risk of viral transmission as most chronic therapies were regarded as non-urgent. During the COVID-19 pandemic, due to the lack of healthcare personnel, the implementation of digital technologies in the hospital sector increased significantly. An article titled "A look to the future: Pandemic-induced digital technologies in vascular surgery" published in the journal of Seminars in Vascular Surgery in September 2021 discussed the acceptance and acceleration of telemedicine, remote monitoring, digital health technology, and three-dimensional technologies, such as three-dimensional printing and virtual reality, face-to-face surgical simulation and training. The article indicated that the use of automated surgical devices has risen during the COVID-19 pandemic. Such developments in the time of the COVID-19 pandemic are expected to propel the growth of the Automated Suturing devices market in the forecast period.

The increase in the number of surgeries and the rise in the number of accident and trauma cases all over the world in the recent times are the major factors attributing to the growth of the automated suturing devices market in the forecast period. With the rise in the number of surgeries performed, there is a rising need for the number of capable healthcare personnel for performing such surgeries. In certain cases, the use of automated suturing is preferred because of its efficient and time saving nature. According to the Royal College of Surgeons of England data on the surgeries in England published in May 2021, there were around 4.95 million people in England, waiting for surgery. The large number of surgeries to be performed is expected to add to the growth of the automated suturing devices market in the forecast period. As per an article titled "Trauma of major surgery: A global problem that is not going away" published in the International Journal of Surgery in September 2020, in global level, around 310 million major surgeries are performed each year with around 40 to 50 million surgeries in the United States and 20 million

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surgeries in Europe. The rise in the number of surgeries around the world is expected to add to the market growth.

According to the World Health Organization data on Road Traffic Injuries published in June 2021, around 20 to 50 million people suffer from non-fatal injuries, most of which requires surgery for the treatment. Such large number of accidents requiring surgeries are expected to boost the growth of the automated suturing market in the forecast period.

In June 2020, researchers at the University of California, Berkeley in collaboration with Intel, developed a semi-supervised AI deep-learning system known as Motion2Vec. The system was designed to watch surgical videos performed by actual doctors, break down the medic's movements during suturing (including needle insertion, extraction and hand-off) and then mimic them with a high degree of accuracy. The research team indicated that further development in the system could help the surgeons in the future by helping them in the completion of repetitive tasks such as suturing in the near future. Such developments in the artificial intelligence driven systems for automated sutures are likely to amplify the growth of the automated suturing devices market in the forecast period.

However, the reduced product availability and the lack of skilled professionals, along with the high cost of the devices are likely to hinder the growth of the automated suturing devices market in the forecast period.

Automated Suturing Devices Market Trends

The Disposable Segment is Expected to Hold a Major Market Share in the Automated Suturing Devices Market.

The disposable automated suturing devices hold the major segment in the automated suturing devices market. An article titled "Automated Suture Fastener Gaining Complete Commitment: Cumulative Propensity-Matched Comparison with Hand-Tied Knot in Heart Valve Surgery" published in the journal of Innovations in June 2021 discussed the advantages of using automated suture fasteners over manually tied sutures. The study indicated that the use of a disposable automated suture fastener, COR-KNOT, resulted in shorter Cardiopulmonary Bypass and Aorta Cross Clamp times, which can greatly help the surgeons. The increasing use of such disposable devices is expected to add to the growth of the disposable automated suturing devices segment in the studied market during the forecast period.

Another article presented in the journal of Annals of Laparoscopic and Endoscopic Surgery in January 2020 titled "Emerging surgical robotic technology: a progression toward microbots" focused on the prominence of robotic-assisted surgery in the laparoscopic surgical domain. The article discussed the tool, Endomina, a single-use over-the-scope suturing device that helps in performing large plications in the stomach with transmural anterior-to-posterior endoscopic sutures. The article indicated that the use of such devices help overcome the visualization and ergonomic shortcomings of laparoscopy while improving the advantages of conventional laparoscopes, which will add to the market growth over the forecast period.

Several research and development programs are being made on the automated suturing devices, which are useful in the growth of the market. In December 2021, researchers at the University of New South Wales Medical Robotics Lab developed smart sutures to speed up wound recovery, which do not need any human intervention and automatically tighten the wound opening. Such innovations are likely to boost the growth of the automated suturing devices market over the forecast period.

North America is Expected to Hold a Significant Share in the Market and Expected to do Same in the Forecast Period (2022 - 2027).

The rise in the adoption of highly advanced techniques and systems in the manufacturing of automated suturing devices and the technological advancements made in robotic assisted surgery is expected to boost the growth of the market in the North American region. The high prevalence of innovative automated suturing devices in the market contributes to the high market

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growth in the region.

The rising number of accidents and injuries in the North American region is adding to the growth of the automated suturing devices market. According to the National Highway Traffic Safety Administration of the United States Department of Transportation article on Traffic Safety Facts 2020 Data, in 2020, there were around 189,950 young drivers in the United States who were injured in traffic crashes. The United States Center for Disease Prevention and Control in its WISQARS Injury Data 2020 indicated that an estimated number of 2,885,545 cases of nonfatal transport-related injuries were recorded in 2020. A large number of accidents and injuries in the United States region is expected to the market growth during the forecast period.

The United States also has a large number of population affected by chronic diseases, majority of which requires surgery as primary means of treatment. Cancer is one of the top ten leading causes of death in the United States. According to the GLOBOCAN 2020 report, the total number of people in the United States affected by cancer in 2020 accounts to around 2,281,658 cases. The number is estimated to rise to 3,123,452 cases by 2040. The large population affected by the chronic diseases and the increase in the necessity of automated suturing devices for the ease in the surgical treatment of such diseases is expected to propel the growth of the automated suturing devices market.

In April 2021, Cynosure entered into an agreement to acquire MyEllevate Surgical Suture System, expanding the Company's portfolio of minimally invasive facial rejuvenation solutions. MyEllevate Surgical Suture System uses patented ICLED light guided suture system, enabling easier suture support system. Such activities by market players are adding to the growth of the market in the United States.

Thus the increasing necessity for automated suturing devices coupled with increasing developments by market players is known to propel the growth of the market in this region.

Automated Suturing Devices Market Competitor Analysis

The Automated Suturing Devices market is moderately competitive and consists of several major players. Some of the companies which are currently dominating the market are Medtronic, Smith & Nephew, Inc., Apollo Endosurgery, Inc, Suture, Boston Scientific Corporation, EndoEvolution, LLC., LSI Solutions, Inc.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

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