

Global Robotics Surgical Simulation Systems Market: Focus on Product Type, Application, End User, 20 Countries' Data, and Competitive Landscape – Analysis and Forecast, 2019-2024

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Abstracts

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Key Questions Answered in this Report:

How is the role of simulation training in enhancing surgical pathways expected to evolve in the future?

Robotic-assisted surgery is currently the leading clinical application incorporating robotic surgical simulation. What would be the next emerging clinical application?

What is the strongest return on investment due to incorporation of competency-based surgical training over mentor-apprentice-based training?

What are the major market drivers, challenges, and opportunities in the global robotic surgical simulation systems market?

What are the steps taken by the industry players to overcome the challenge associated with the lack of clinical data supporting the efficacy of simulation training?

How would the current dominating stake conquered by companies offering robotic simulation integrated with surgical robotics, be impacted due to the

evolving perception of end users toward the incorporation of robotic simulation?

What are the key strategies incorporated by the leading players of robotic surgical simulation systems market to sustain the competition?

What is the current total market size and forecasts (until 2024) for different product categories available in the market?

What are the current total market size and forecasts (until 2024) for different robotic simulation systems associated with each type of therapeutic application?

What is the role of each type of player in robotic surgical simulation systems market?

Overview on the Global Robotics Surgical Simulation Systems Market

The global incidence of surgical errors was acknowledged to be 5.5 million in 2008. Witnessing a compound annual growth rate of 3.91%, the surgical errors incidence was conceded to be 7.9 million in 2018. Acknowledging the growth in the past ten years, the surgical errors incidence is anticipated to reach a devastating figure of 10.5 million by 2029. The associated economic burden is expected to reach \$161 billion by 2029. Presently, one in every 16 surgical procedures in the U.S. is recognized to be a surgical error. In 2018, the U.S. witnessed approximately three million cases of surgical errors. The scenario gets further baffling if the statistics associated with other developed countries, such as Japan, and China, come into focus. The countries together contributed to approximately 66% of the global incidence of surgical errors. China registered the second highest incidence of surgical errors.

The procedural incompetence and lack of adequate pre-operative planning are the leading causes of surgical errors. Together, the two factors contributed for 51% of surgical error cases witnessed in the last ten years. Apart from them, poor peer communication is acknowledged to be attributing to 12% of cases.

Hence, the statistics evidently show that the lack of adequate surgical training is the predominant cause of massive surgical errors' incidence. The growing emphasis on patient safety, is strengthening the obligation of decreasing the dependency of surgical training over the apprentice-mentor relationship and operating room-based training.

Robotics surgical simulation systems are one of the ground-breaking technologies which hold an enormous potential to transfigure the surgical education practices. The recent advancements in computational technologies augmented by the immeasurable knowledge of functioning of the human body, have made disruptive technologies such as robotic simulation systems, a reality.

The key abilities of robotics surgical simulation system, are

1. Provision of standardized-safe practice for surgical training with iterative practice freedom
2. Scope for developing case-specific operative planning
3. Provision of realistic scenario to the utmost accuracy
4. Scope for framework enabling training for the entire operational team
5. Provision of competency-based framework which enables performance assessment
6. Robotics Surgical Simulation Systems Market Forecast

Global Robotics Surgical Simulation Systems Market Forecast, 2019-2024

The global robotic surgical simulation systems market was valued to be \$276.5 million in the year 2018 and is anticipated to witness an impressive double-digit growth rate, to reach \$1.03 Billion by 2024.

Expert Quote

“A dynamic shift in surgical education from the traditional apprenticeship model to a competency-based model is required to address the enormous surgical errors’ burden. The incorporation of robotics surgical simulation systems imparts extraordinary hand-eye coordination and ambidextrous surgical skills. It also enhances psychomotor skills and intra-team synchronization to impart case-specific capabilities.

The market for robotics surgical simulation systems is expected to grow ten fold in the next ten years.”

Scope of the Robotics Surgical Simulation Systems Market

The report constitutes of an in-depth study of the Global Robotics Surgical Simulation Systems Market, including a thorough analysis of the types of robotic surgical simulation platforms. The study also presents a detailed analysis of the market dynamics and the estimation of the market size over the forecast period 2019-2024. The scope of this

report is focused on the different applications of robotic surgical simulation with different procedures and their country-wise analysis.

The purpose of the study is to gain a holistic view of the Global Robotic Surgical Simulation Systems market in terms of various factors influencing it, including regulatory reforms and technological advancements. The market has been segmented into 'product type', 'application type', 'end user' and 'region'. The scope of this report is centered upon conducting a detailed study of the products allied with the Global Robotic Surgical Simulation Systems Market. In addition, the study also includes exhaustive information on the unmet needs, perception on the new products, competitive landscape, market share of leading manufacturers, growth potential of each product, end user, application, and region, as well as other vital information with respect to the robotics surgical simulation systems market.

Market Segmentation

The robotics surgical simulation systems market has been segmented on the basis of product type, application, end user, and region. The product type segment is further segmented into conventional surgery and minimally invasive surgery simulation platforms and robotic surgery simulation platforms.

On the basis of application, it is further segmented into general surgery, gynecology surgery, urology surgery, orthopaedic surgery, neurological surgery, cardiological surgery, other surgical applications.

Based on the end user segment, the market is segmented into hospitals, academic institutes and teaching hospitals, and commercial simulation center. Lastly, the regional segment is further segmented into North America, Europe, Asia-Pacific, and Rest-of-the-World (ROW).

Key Companies in the Robotics Surgical Simulation Industry

The key players contributing to the global robotics surgical simulation systems market are 3D Systems Corporation, CAE Inc., Intuitive Surgical Inc., Mentice AB, Mimic Technologies, Inc., Simulated Surgical Systems, LLC, Touch of Life Technologies (ToLTech), VirtaMed AG, Voxel-Man, and VRmagic.

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