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## Robotics in the Operating Room Gives Surgeons Greater Control, Improves Patient Outcomes

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**They're here. Robotics in the operating room is happening now and is the fastest growing segment within the healthcare medical device sector.** The myth of robots actually performing surgery is finally being dispelled. Robotics systems offer a tool for the surgeon to aid in surgical procedures for greater flexibility, precision and control. Patients benefit from improved medical outcomes and faster recovery times.

Robotic surgery is defined as "any operation that includes an automated piece of equipment or technology." Clinical robotic surgical systems typically include a camera arm and mechanical arms with the surgical instruments attached. The surgeon controls the arms while seated at a computer console near the operating table to guide the robot. A systems console allows the surgeon to view the procedure on a high definition 3-D screen for a magnified view of the surgical site. If in the rare event complications arise, the surgeon and operating room team can quickly convert to traditional hands-on procedures. Robotic-assisted surgery gives the surgeon more intricate range of dexterity as the robot arms can move and rotate in ways that a human hand cannot. Sophisticated robotic systems enable the surgeon to be more precise, enhance surgical vision of the site and assume greater control over delicate procedures than conventional techniques.

Robotics in the operating room is typically associated with minimally-invasive surgery, where procedures are performed through small incisions resulting in minuscule and sometimes unnoticeable scarring. Often, the site does not require stitches, replaced by Steri-Strips that fall off or can be removed after a certain number of days following surgery. For the patient, the robotics-aided procedure results in fewer complications, including post-operative site infection, less pain and blood loss and, more importantly, quicker recovery. Today, with more technologically-advanced robotics, surgeon-assisted procedures are being utilized for more complex, difficult open surgeries such as prostate, kidney, bladder and bypass operations.





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Robotic surgery dates back to 2000 when Da Vinci System, now owned by Intuitive Surgical and considered to be the market leader, was approved by the Food & Drug Administration and subsequently updated in 2014 with the Da Vinci Xi model. Since then, the healthcare industry estimates that more than 1.7 million robotic procedures have been performed in the U.S., according to Health eNews. Numerous approved systems are located in leading hospitals worldwide, including the Monarch Platform, CarPath System that incorporates virtual reality for remote procedures and the UK's National Health Systems' Versius platform. In 2018, medical robotics systems was a \$3.9 billion (USD) industry and is expected to grow more than 10% over the next 5 years, as reported satisfaction.

So, if you are a patient that needs surgery and have been told it will be a robotic-assisted procedure, don't worry. Just make sure you are aware of the pros and cons. The surgeon and professional medical team will be on hand. Robots are not replacing the surgeon. And you will no doubt be up and moving again in no time.

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