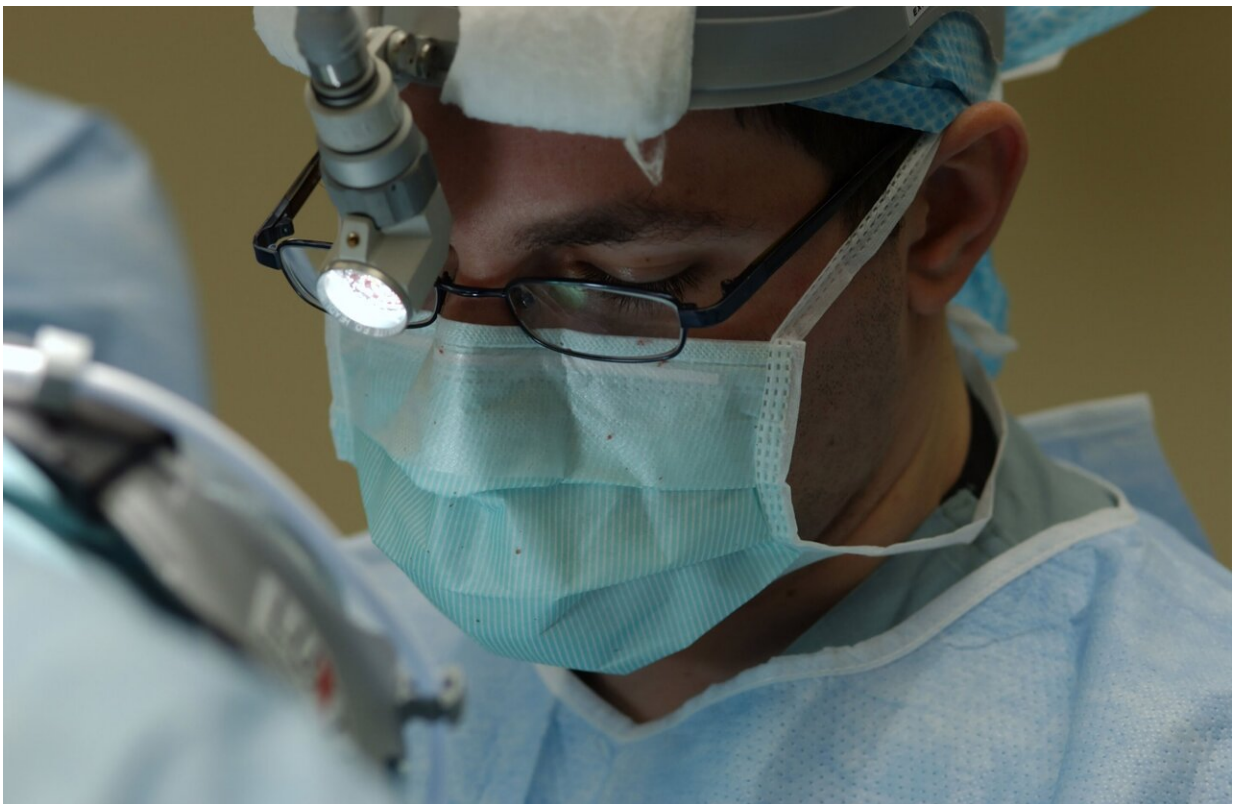


# Will you let a robot assist in surgery on you?

## The role of advertising in high-tech medical procedures

March 1 2023, by Marilyn Stone

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Researchers from Korea Advanced Institute of Science and Technology and University of Texas at Dallas published a new *Journal of Marketing*

article that examines whether direct-to-consumer advertising for robotics surgery is effective at swaying patients to choose it over other types of procedures.

The study is titled "The Role of Advertising in High-Tech Medical Procedures: Evidence from Robotic Surgeries" and is authored by Tae Jung Yoon and TI Tongil Kim.

Robotic surgery and the ethics around its adoption has been a thorny issue since 2000 when the Food and Drug Administration (FDA) approved the world's first minimally invasive [robotic surgery](#) called the Da Vinci system. Surgical robots provide a magnified high-definition 3-D view of the surgical site and allow surgeons to control the robot arms, offering more flexibility and a greater range of motion than is possible with human hands alone.

The Da Vinci system has become the most widely adopted robotic surgical system in the world and is approved by the FDA for many procedures in urology, [thoracic surgery](#), [general surgery](#), and gynecology, among others. The system has been installed in more than 1,500 U.S. hospitals whose estimated annual procedures performed increased from 136,000 in 2008 to 664,000 in 2017.

Advocates of robotic surgery argue that superior dexterity and smaller incisions translate into better patient outcomes. However, robotic surgeries have often been criticized for being substantially more costly than [laparoscopic surgery](#) without clear evidence of improvement in treatment outcomes, thereby contributing to higher health care costs. This tension points to the need to determine the true value of robotic surgery.

The relevant question arises for health care marketers: Is direct-to-consumer advertising (DTCA) for robotics surgery effective in swaying

patients to choose it over other types of procedures?

This new study analyzes approximately 140,000 individual patient records and television advertising data from Florida between 2011 and 2015 to investigate how hospital advertising of robotic surgery affects patients' choice of robotic surgery over more conventional laparoscopic and open surgeries.

As Yoon explains, "We find that patients exposed to robotic surgery advertising are more likely to choose it over the conventional laparoscopic surgery. In particular, every additional \$1 per 100 capita spent on robotic surgery advertising during a quarter increases the likelihood of the procedure being chosen by 13.9%."

For hospital marketers, these results indicate that DTCA is an effective way to sway patient choice, even for decisions involving direct and substantial health risks. This study quantifies that the advertising of high-tech surgery can influence consumers to choose this type of surgery.

While it does not observe long-term health benefits for patients who have robotic surgery, the shorter length-of-stay associated with robotic surgery (approximately five hours shorter) is a clear benefit. As long as the patient's out-of-pocket costs are low (e.g., no or low deductible), robotic surgery advertising can improve consumer welfare.

The study offers lessons for several stakeholders in the health care sector:

## **For health care providers**

The study delivers new insights into the development and deployment of effective advertising related to high-tech procedures. For example, providers can note that Medicaid patients are more responsive to robotic

surgery television advertising. In addition, results show that patients discern and respond to high-tech ad creatives. Therefore, marketers should consider consumer responses to specific advertising content when developing marketing plans.

## **For insurance providers**

Robotic surgery ads can hurt insurance providers that offer plans with low out-of-pocket costs, especially when robotic surgery's shorter length-of-stay in hospitals is deemed minimal. Results also imply that robotic surgery advertisements have a greater influence on Medicaid patients, who tend to be of lower socioeconomic status—a finding that may be of interest to the federal and state governments funding Medicaid.

## **For health care policymakers**

Agencies like the FDA must note that while patients might be affected by robotic surgery advertising, no clear evidence demonstrates the superiority of robotic surgery with regard to long-term treatment outcomes. Although FDA regulations require drug manufacturers to offer a balanced view of the risks and benefits in advertisements, DTCA of robotic surgery lies outside the scope of this regulation. As a consequence, television DTCA for [medical procedures](#) or medical devices requires no disclosure of either benefits or risks.

"Our results show that robotic surgery advertising can materially increase demand for the procedure," says Kim. He adds that "Given the complexity of surgical operations and their risk for patients, regulators may consider imposing rules for the marketing of [high-tech](#) procedures similar to those for pharmaceutical DTCA that require disclosure of the pros and cons of the procedures, including possible surgery complications. This would allow patients to make more informed

decisions among surgery options."

Given the risks associated with [surgery](#), this study's findings on advertising effectiveness point to the need for further policy discussion on the transparency of [advertising](#) content.

**More information:** Tae Jung Yoon et al, EXPRESS: The Role of Advertising in High-Tech Medical Procedures: Evidence from Robotic Surgeries, *Journal of Marketing* (2022). [DOI: 10.1177/00222429221151058](#)

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