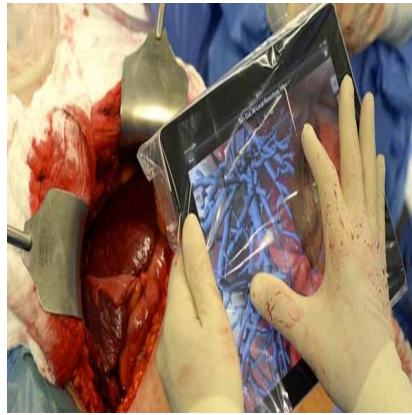




## **Surgical Simulator Guides Operations From All Angles**



The airline industry is playing a role in healthcare with medical device startup company Surgical Theater's development of the Surgical Navigation Advanced Platform (SNAP), which has just received FDA clearance. Inspired by flight simulators, the device allows doctors to simulate surgical scenarios to better plan and perform intricate operations. It also has the potential to reduce medical errors, and can be used as a teaching tool.

### **SNAP Judgments**

Using SNAP, surgeons are guided through medical operations through the use of imaging tools that augment reality. Rather than waiting until a patient is in the OR to get a look at which structures are involved in a disease process and how closely they are situated to vital organs and arteries, doctors can get a view of virtual reality on a computer screen.

For example, in neurological surgery, a patient's CT or MRI results are utilised to determine the most efficient steps to take toward the resection of brain tumours. Doctors can rotate images or see through structures by making them semi-transparent on the screen. By doing so, surgeons are better informed about how to proceed in order to ensure the removal of the highest number of cancerous cells, without endangering important arteries.

### **New Perioperative Perspectives**

At University Hospitals Case Medical Center in Cleveland, Ohio, where the new device is already being included in integrated surgery, the chairman of neurological surgery compares SNAP to watching a live sporting event. "Multiple cameras are located around the arena and an editor can freeze the image, rotate, zoom in, zoom out and see things that he could not otherwise see," said Dr. Warren R. Selman.

Medical liability settlements cost healthcare providers \$1.3 billion each year. If an FDA-approved device such as SNAP can offer surgeons new ways to improve patient outcomes, there is significant potential for a positive economic impact, not to mention the obvious advantages for patients undergoing surgery.

### **Growing Popularity of Surgical Theater**

SNAP is not Surgical Theater's first foray into the world of surgical simulation. Its Surgical Rehearsal Platform also uses augmented reality to prepare doctors for complex procedures. The company is currently working on a platform, which would assist in spine surgeries. Such tools are becoming increasingly sophisticated thanks to software development companies such as Immersive Touch and Simbionix.

While the goal of the augmented reality devices is to improve outcomes in a clinical setting, the technology also plays an important role in training new doctors. Students can practice surgery in an environment that allows for mistakes to be made without endangering the lives of real patients. Additionally, the popular use of surgical simulators in educational facilities means that fewer animals are required for experimentation.

[Source: Surgical Theatre](#)

Image credit: Google Images / Wired

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