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# Digital technologies can address unequal access to surgical expertise, say U.S. surgeons

Survey of 1,000 U.S. surgeons finds digital tech like AI and live streaming crucial to closing surgical care gaps in under-resourced regions.

**October 10, 2024** – A 2024 survey of 1,000 U.S. surgeons reveals that the majority believe advancements in digital technologies such as live streaming, artificial intelligence (AI), and virtual reality (VR) could significantly help reduce disparities in access to surgical expertise, particularly in under-resourced regions.

The latest State of Surgery survey, commissioned by Medtronic, aimed to understand the perspectives of U.S. surgeons on the role of digital technologies in addressing healthcare challenges. Responses indicate a widespread belief that digital solutions could improve both the quality and reach of care across the country and even globally.



## Addressing Healthcare Inequities

The U.S. healthcare system faces substantial disparities, especially in rural and under-resourced communities where access to surgical expertise is limited by hospital closures and a shortage of specialists. In 2020 alone, 19 rural hospitals closed, leaving around 60 million people at risk of inadequate healthcare services.

U.S. surgeons highlight the potential for digital technologies to bridge this gap, offering greater access to surgical resources, training, and specializations for patients and professionals alike. With digital tools, surgeons believe they can enhance surgical outcomes and improve the consistency of care across regions.

## Leveraging Technology for a More Equitable Future

Digital technologies, already utilized in other sectors, hold significant potential to transform surgical care.

Surgeons identified live streaming, AI, and VR as tools to address disparities in surgical expertise and training.

- **Live streaming and telehealth** – Live streaming services were seen by 84% of respondents as a way to improve access to specialist consultations real-time in underserved areas.

According to the survey, 82% believe real-time remote consultations and surgeries could be facilitated by telemedicine platforms, enabling rural hospitals to tap into expertise from leading surgeons across the country, and world.

- **AI-driven diagnostic tools** – Artificial intelligence is already playing a critical role in helping to diagnose diseases. It could also play a critical role in guiding real-time decision support during procedures, helping to aid surgeons. Nearly 85% of surgeons surveyed said AI could enhance diagnostic precision. This could help close regional gaps in surgical care and improve outcomes for patients who would otherwise face long wait times or travel distances.
- **VR simulations and digital training platforms** – Surgeons are always looking to advance their skills, yet 64% of respondents reported they don't have enough time to dedicate to training. VR simulations and digital platforms offer a complementary learning option, with 85% of surgeons saying these tools could enhance surgical training by making it accessible worldwide.

Furthermore, 81% believe VR could be used to provide advanced surgical training without geographic constraints, and 83% said global digital networks for sharing surgical best practices could elevate the standard of care.

Many surgeons report feeling constrained by the technology currently available to them, with 62% stating their systems could be significantly improved. Moreover, 73% of respondents said that the technology they rely on limits their ability to perform at their best.

Dr. Peter Billing, of Washington-based Transform Weight Loss, emphasized the value of these technologies: *"Surgeons are always learning. We must continuously practice and learn new techniques to be the best we can be. Digital technologies offer real-time, real-life opportunities to safely collaborate and enhance our skills, regardless of specialty or location in the world. It means more surgeons have greater access to learn from the best and enhance their performance. This is a game-changer for surgical care."*

Mike Marinaro, executive vice president of the Medtronic Medical Surgical Portfolio, commented: *"Digital technologies like Live Stream help break down barriers to surgical training. Whether refreshing skills or mastering a new technique, these safe technologies put critical insights into the hands of surgeons and create direct access to other experts – regardless of location. Empowering surgeons with these tools will improve patient care across the world."*

### **A Medtronic Commitment to Equipping Surgeons with Digital Tools**

Medtronic has launched its Touch Surgery™ Live Stream technology, enabling surgeons to safely and securely share and observe procedures in real-time anywhere in the world, including the U.S., India, and Western Europe. In August, Dr. Peter Billing performed the first U.S. procedure using this technology at Washington-based Transform Weight Loss, demonstrating its potential to enhance collaboration and provide real-time access to

surgical expertise.

Earlier this year, Medtronic Surgical piloted the Touch Surgery™ Live Stream technology at three major hospitals in the U.S., Portugal, and India. These pilot programs were designed to raise awareness of the technology's impact on surgical training and patient care, capturing real-world use cases and showcasing how digital tools can bridge the gap in surgical expertise.

To expand access to this innovative platform, Medtronic is partnering with the American College of Surgeons (ACS) for its conference on October 19-22. Surgeons attending the event will have the opportunity to experience the benefits of Touch Surgery™ Live Stream firsthand through interactive, real-time demonstrations.

## **Notes to editors**

### **Survey methodology:**

The survey was conducted from May 17, 2024, to May 31, 2024, targeting surgeons and medical practitioners across public and private sectors in the U.S. Responses were gathered from 1,000 surgeons across four regions and 21 cities. The survey was carried out by CensusWide on behalf of Medtronic and builds on findings from the [State of Surgery in the UK](#) survey, published July 24, 2023. Medtronic conducted the "State of Surgery" reports to provide a comprehensive overview of the surgical landscape to understand firsthand what the most pressing challenges are for surgeons, such as workload, training, and access to digital technology in the OR.

### **About Medtronic**

Bold thinking. Bolder actions. We are Medtronic. Medtronic plc, headquartered in Galway, Ireland, is the leading global healthcare technology company that boldly attacks the most challenging health problems facing humanity by searching out and finding solutions.

Our Mission – to alleviate pain, restore health, and extend life – unites a global team of 95,000+ passionate people across more than 150 countries. Our technologies and therapies treat 70 health conditions and include cardiac devices, surgical robotics, insulin pumps, surgical tools, patient monitoring systems, and more.

Powered by our diverse knowledge, insatiable curiosity, and desire to help all those who need it, we deliver innovative technologies that transform the lives of two people every second, every hour, every day.

Expect more from us as we empower insight-driven care, experiences that put people first, and better outcomes for our world. In everything we do, we are engineering the extraordinary. For more information on Medtronic, visit [www.Medtronic.com](http://www.Medtronic.com) and follow Medtronic on [LinkedIn](#).

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More detailed findings are available in the accompanying PDF. To request interviews or spokesperson comments, please contact:

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<https://news.medtronic.com/Digital-technologies-can-address-unequal-access-to-surgical-expertise.-say-U-S-surgeons>