

# Four ways healthcare technology is changing patient care



**P**roviders are serving people with more complex emotional, social and physical needs than ever before, while their health systems contend with resource limitations and financial constraints. Meanwhile, the healthcare industry continues to rapidly evolve, demanding more sophisticated methods of care delivery and treatment.

To succeed in this landscape, health systems must move beyond transactional interactions with device makers—and instead embrace productive, solutions-focused relationships with experienced healthcare technology leaders.

“Technology clearly plays a critical role in today’s healthcare systems. It also makes a significant difference in improving patient outcomes and experiences,” said Bob White, Medtronic executive vice president and president of the Medical Surgical portfolio. “By offering solutions that enhance their ability to deliver care, we can push the boundaries of what’s possible today.”

As a healthcare technology leader doing exactly that, Medtronic is ensuring that people are always at the center of innovation and working to meet the unique needs of each individual. With research and development investments of \$2.7 billion in 2021 alone, Medtronic is moving the industry forward by focusing on four critical aspects of healthcare technology: artificial intelligence and data analytics, personalization, connected care and miniaturization.

## AI and data analytics

When AI solutions are integrated into health system workflows, clinicians have more time to focus on what matters most: patients. AI algorithms equip clinicians with precise, real-time information on each patient’s needs, improving decision-making accuracy, increasing care quality and promoting early intervention—all while reducing time spent searching for the right solutions. Along with augmenting clinicians’ skills and expertise at the point of care, AI offers the potential to expand the reach of clinician training and education. Using this technology to better support clinicians ultimately elevates the quality of care that patients receive and allows health systems to serve more people in new ways. By harnessing the power of data to address undertreatment and detect risk early, Medtronic can redefine patient access.

And recognizing this vast potential, Medtronic is committed to the research, development and responsible deployment of AI.

## Personalization

Healthcare is deeply personal, and technology gives clinicians new ways to deliver predictable and standardized—yet tailored—care. With people-centered solutions like those offered by Medtronic, physicians can discover and treat conditions earlier. This focus on prevention rather than emergency procedures is essential to achieving the best outcome for each patient and helping them live their healthiest lives, with therapies that suit their individual needs.

What’s more, personalized solutions can help reduce disparities in care and transform how healthcare is delivered to tackle the global threat of complex and challenging diseases. To democratize efficient, equitable care, these solutions must be available to more people—at scale—not just to the elite. By reducing disparities in care, empowering the transformation of health tech and increasing access in marginalized communities, health systems will be better able to deliver the right treatments at the right time.

## Connected care

As the world’s most complex operating system, the human body can be best understood with advanced healthcare technology and a connected care ecosystem. Connected care transforms how patients are treated through convenient features such as remote patient monitoring, telehealth and smartphone apps, which give people the freedom they deserve while providing meaningful insights that help clinicians.

Implantable and wearable devices that connect doctors and patients serve to enhance flexibility, safety and time management. By removing barriers to access and delivery and accelerating the time to proper treatment, connected care can radically transform the way health is managed.

“Technology connects patients with their care team for more personalized care that is tailored to their needs,” said Dr. Laura Mauri, chief scientific, medical and regulatory officer at Medtronic. “More and more, we seek to understand what the patient wants and how they will use products and therapies in real life.”

## Miniaturization

Advances in smallest-size healthcare technology are also improving the patient and clinician experience, allowing people to live without constant reminders of their condition and facilitating convenient contact with clinicians. Miniaturized healthcare technology is also changing surgical and diagnostic procedures in profound ways. When used in minimally invasive procedures—which can outperform traditional care with reduced procedure time, lower complication risk and shorter hospital stays—smaller, less obtrusive devices can reduce discomfort. And wafer-scale technology that powers long-lasting batteries can improve patient experience. Additionally, smallest-size health tech offers the flexibility of delivering diagnostic technology to patients’ homes for convenient screening and analysis.

## Leadership through technology

Healthcare is continuously changing, and organizations that embrace people-centered technology will pave the way for decades to come.

As a global healthcare technology leader, Medtronic is equipping health systems for future success. By improving outcomes with AI, personalized solutions, connected care and miniaturization, Medtronic is driving better health access for our world with innovation that puts people at the center.

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