

PUSH FOR PROGRESS

Collaborations are Fueling the Future of Healthcare



Around the globe, and across industries, partnerships are transforming healthcare. With an emphasis on innovation, value, and data transparency, these collaborations are helping improve patient outcomes and manage overall costs of care.

Today, healthcare systems struggle to contain the leading causes of mortality — heart disease, stroke, cancer, chronic respiratory diseases, and diabetes — which account for 87 percent of all deaths in high-income countries.¹ Healthcare costs, now at \$948 per person a year globally, are increasing,² and total global healthcare spend now exceeds \$7.8 trillion.³

Annual Global Healthcare Spend exceeds \$7.8 Trillion³

In emerging markets, specifically the 48 Least Developed Countries (LDCs), rates of non-communicable diseases vary. There is lower prevalence of conditions like diabetes and obesity, but same or higher rates of high blood pressure and hypertension, as compared to more developed countries.⁴

Solutions to address these problems are within reach, yet, there are complex barriers that stand in the way. Those delivering care around the world are at the epicenter of this paradigm shift, pushing for change to happen sooner rather than later.

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At Medtronic, we see rapid advancements in medical technology playing a major role in the necessary move towards sustainable models of care. To get there, we understand the need for stronger collaboration between med tech companies, payers, and clinicians. We also recognize that risk-based contracting and data transparency

are foundational requirements in the journey toward delivering better patient outcomes, improving access, and lowering overall costs of care.

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Around the globe, partnerships are beginning to take hold that exemplify how to collectively define and understand the challenges that exist; address them head on; explore opportunities; and accelerate progress towards a better future.

As new collaborations across healthcare emerge, we can learn from those fueling today's progress and build roadmaps to help implement similar programs for widespread change.

HISTORY ROOTED IN PARTNERSHIPS

For seventy years, Medtronic has harnessed the power of collaboration with clinicians to develop and refine some of the most significant advances in medical technology. Our company was founded on the development of the first battery-powered pacemaker because of a partnership Earl Bakken forged with a local physician during an historic power outage at a Minnesota hospital. Bakken's vision to collaborate with others to create meaningful innovations was the catalyst that started Medtronic.

Over the years, we've expanded our portfolio well beyond pacemakers, and our partners span multiple industries and geographies. Today, our 86,000 employees are working with hospital leaders, technology experts, payers, and healthcare innovators to deliver on the Medtronic Mission to alleviate pain, restore health, and extend life.

Medtronic
Further, Together

INNOVATING TO DRIVE BETTER VALUE

Many large hospital systems are starting to make the shift towards value-based healthcare (VBHC) models. Those leading the effort have challenged the status quo of fee-for-service models and are exploring new methods of delivering care that expand patient access and reduce costs.

In Ontario, for example, a new approach to procurement using competitive dialogue is being tested. It comes by way of a grant from the Ontario Ministry of Government and Consumer Services. "I think if any of us stood in front of a white board and redesigned the delivery of healthcare in Ontario, we would focus on competitive dialogue and innovative procurement," said Bill Charnetski, Chief Health Innovation Strategist for the province of Ontario. "These have the potential, if used across the system, to enhance the focus on patient outcomes, at the right cost, measured across the patient journey through the system."

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Through in-depth discovery sessions and multi-year program development, we've seen some of our long-standing partners — including Maastricht Hospital in the Netherlands, and Southlake Hospital in Ontario — shift toward this new model to achieve their goals of better patient access and improved efficiencies.

"Our relationships with industry have to change," explains Dr. Zaev Wulffhart, Physician Leader, Regional Cardiac Care Program, Southlake Regional Health Centre in Ontario. "We have to stop thinking of them as vendors and more as partners in care. They all have a commitment to a better quality of life for their patients, just as we do," he said.

Learn more about our collaboration with Southlake Regional.

Newer VBHC partners — like Lehigh Valley Health Network in Pennsylvania — are building out programs that could revolutionize the way care is delivered in the United States, implementing risk-based contracts and unique care delivery models. We are meeting partners where they are on the journey toward VBHC, and working together to develop solutions that are uniquely tailored to meet their needs.

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*Dr. Zaev Wulffhart,
Southlake Regional Health Centre*

"This is the kind of forward thinking we need, in reaching out with our partners at Medtronic, to improve our community," says Brian Nester, President and CEO of Lehigh Valley Health Network. "This is the future of healthcare, and we're about to begin developing it right here."

Learn more about our VBHC collaborations.

Working with our Integrated Health Solutions (IHS) team, hospital systems within developed and emerging markets are building programs that drive efficiency and improve patient access to care. From concept to outcomes data, our teams work with key members of a hospital's staff to identify root causes, develop solutions, and measure results of programs, protocols, and procedures.

The team at Horizon Health Network in New Brunswick, Canada, has seen strong results from work that started in 2016 with a series of Six Sigma Kaizen events. With a focus on their heart surgery patients, collaboration among care delivery teams has improved efficiencies and patient access by reducing surgical wait times.

"Initially, the process was intimidating," said Michelle Brodersen, resource nurse at the New Brunswick Heart Centre. "But as I got more involved in the project, I got to see how one small change can make a huge impact — not just on our workload, but on patients' lives."

Six months into the strategic partnership, the Heart Centre saw a 14 percent increase in operating room capacity, and a 44 percent reduction in average wait times. And the work continues. Our IHS team is currently involved in advising Horizon Health's electrophysiology labs, cardiac catheterization labs, as well as the ECG department and the hospital's Cardiac Outpatient Clinic.

Learn more about our partnership with Horizon Health Network.

New Brunswick Heart Centre 6-Month Results:

14% 
operating room capacity

44% 
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A heightened emphasis on improved patient outcomes is taking hold among private health plans, too. In recent years, industry leaders like United Healthcare (UHC) and Aetna have accelerated the shift towards value-based care. They are not only helping provide patients with access to the latest in medical technology, but are delivering savings to the broader healthcare system through innovative reimbursement models.

Our partnership with UHC began in 2016, rooted in a shared commitment to patient safety, service, and cost. First-year results, including analysis of over 6,000 UHC members with diabetes on Medtronic MiniMed™ 630G and previous generation insulin pumps, demonstrated a 27 percent decline in the rate of preventable hospital admissions, compared to members on multiple daily injections of insulin.⁵

“These results show that patients with diabetes can benefit from using insulin pumps and comprehensive support services, thereby increasing the quality of the care they receive and reducing hospital admissions as well as costs,” said Peter Pronovost, M.D., chief medical officer, United Healthcare. “The first-year results are encouraging, and we will monitor patients using Medtronic pump therapies to ensure we continue to see improved quality of care, fewer hospitalizations, and lower costs.”

PARTNERSHIPS POWERED BY DATA AND TECHNOLOGY

Across a complex healthcare landscape — consisting of an aging population, consumer-driven healthcare, and unsustainable rising costs of care — we must combine our expertise in medical technology design and delivery with the knowledge and insights of experts leading in other areas of healthcare innovation. At the core of these collective efforts to accelerate progress lies a common resource: data. Not just raw data, but actionable data that informs decisions.

Through a partnership initiated in 2015, we’ve worked with IBM Watson Health to develop the Sugar IQ™ smart assistant for those living with diabetes. “Our partnership with Medtronic came together the day our organization [Watson Health] was born,” says Dr. Lisa Latts, Chief Deputy Health Officer at IBM Watson Health. “It’s one of our core partnerships.”

The mobile diabetes assistant takes data from Medtronic continuous glucose monitors and reveals patterns that may be hard to see so that someone with diabetes gains meaningful, personalized insights via a mobile app. These insights show how lifestyle choices, medications, and multiple daily injections impact diabetes management and the time spent with glucose in the target range.

“Put us together with Medtronic, and we believe we can create solutions that will lead to stronger patient engagement,” says Latts. “We want to make it easier for people to manage their diabetes.”

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*Dr. Lisa Latts,
Chief Deputy Officer, IBM Watson Health*

Medtronic Care Management Services (MCMS) has recently implemented new data analytics capabilities in its remote patient monitoring services that help identify at-risk patients. The patient monitoring services empower clinicians with the timely information that may help them to treat complex, chronic, co-morbid patients by addressing risk factors before they lead to complications. But even before the patient is enrolled in our service, MCMS runs data analytics to help health systems and payers identify the patient cohorts who would benefit most from remote monitoring. For example, we have worked closely with certain private payers in the last year, analyzing claims, EHRs, hospital discharges, and other data sets to identify patient cohorts recommended for remote monitoring. Combining this data with risk stratification algorithms and inclusion criteria, we are able to help refine the cohort and recommend those patients best suited to benefit from our services. The result is a narrower patient population with a guarantee to the payer through a risk-share model that patients enrolled in our MCMS patient monitoring services will experience a reduction in hospitalizations and ER visits.

“What’s important to remember about VBHC or risk-based contracts is that sometimes you need to focus on a smaller population to show a stronger, value-based impact,” explains vice president and general manager of MCMS, Sheri Dodd. “We have to work together with our partners to identify the subset of patients who will benefit most from our services.”

Learn more about Medtronic Care Management Services.

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*Sheri Dodd,
Vice President/General Manager,
Medtronic Care Management Services*

With advanced technology in mind, our partners at SingHealth — Singapore's largest health network — are working to tackle the country's diabetes epidemic, which costs the Singapore economy more than \$1 billion annually.⁶

Combining Medtronic expertise in diabetes management solutions with SingHealth's experience in holistic diabetes care, the collaboration aims to expand patient education and improve access to innovative diabetes care. Provider education and training is also a focus so that physicians are up-to-date on the latest diabetes technologies and care recommendations.

[Learn more about our partnership with SingHealth.](#)

**SingHealth
partnership
for diabetes:
Addressing an
epidemic costing
Singapore
\$1B
annually**

stakeholders, meets regularly with Medtronic to discuss the challenges hospitals face related to data and IT solutions.

Staying true to our humble beginnings, we also continue to seek out R&D partners who help ensure we are building meaningful, patient-centric solutions. With 21 R&D facilities around the globe and more than 46,000 patents, we are committed to ongoing physician training and collaboration. In the academic setting, too, we have forged strong R&D partnerships with leading universities such as Duke University, University of Minnesota, and the University of Washington.

[Read about our neuroscience partnership with the University of Washington.](#)

From these, along with other collaborations spanning the last seven decades, we've learned that partnerships that deliver clinical and economic value:

- Aren't just about product innovation, but also process innovation, and building new ideas from the beginning with inclusive, multi-disciplinary teams.
- Take leaps of faith and respect between partners in the belief that everyone benefits from collaboration. This requires a willingness to share data and insights, sometimes without pre-defined outcomes or agendas.
- Require patience and persistence, investing in quality to deliver consistent, integrated care, and better patient outcomes.

TAKING HEALTHCARE FURTHER, TOGETHER

At Medtronic, we are committed to transforming healthcare, but we know we can't do it alone.

As global healthcare evolves, it is our responsibility as partners to evolve with it. We see great opportunities ahead to help more patients, in more places, around the world. Getting there will take working with others who share a steadfast commitment to data transparency, value-based contracting, and improved care pathways.

We recently talked to a group of HBR Roundtable attendees about the way forward and the role of collaboration in the transformation of healthcare. Thomas Lee of Press Ganey and Harvard University summarized it best, saying, "I strongly believe the real competitive differentiator for 21st-century healthcare systems is going to be teamwork — the ability to organize terrific multidisciplinary teams with clear roles and responsibilities."⁷

We believe partnerships in the medical technology evolution are key to making progress possible. If you share our vision and urgency to make a difference for patients around the globe and propel healthcare forward, we invite you to join us on the journey.

[Learn more about how we are working to take healthcare Further, Together.](#)

PARTNERING TO DEFINE THE FUTURE

Perhaps the most valuable characteristic of a strong, sustainable partnership is a willingness to listen, learn, and grow. Likewise, collaboration requires a level of nimbleness and flexibility to explore the opportunities in front of us and take on risks together that drive progress further, faster. And putting the full power of data and technology into the transformation of healthcare requires continuous input and feedback from stakeholders.

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We work with organizations like Harvard Business Review (HBR) and the Economist Intelligence Unit (EIU) to share data, study results, and insights among industry experts. And through value-based healthcare forums and roundtables, leaders from around the globe share pain points, present ideas, and offer feedback to industry partners like Medtronic about the challenges that exist at the system level.

Tapping into other groups like patients and clinicians, our Applied Innovation Lab in Minnesota serves as a working space for teams to better understand patient and clinician needs and to make course corrections in the development of products or services based on customer feedback.

As we continue to explore the impact of data on the future of healthcare, our IT and Digital Health teams have created the Medtronic Hospital IT Advisory Board. The group, made up of hospital CIOs, Chief Technology Officers, and other IT

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