USING VALUE-BASED HEALTHCARE TO IMPROVE PATIENT OUTCOMES
Today’s sensor technology is gaining in popularity among consumers, with research suggesting that by 2018, 81.7 million adults in the United States will use some sort of wearable technology.¹ From tracking fitness levels to monitoring blood glucose — consumer technology is literally putting the power of preventative medicine in the palm of a patient’s hand.

Combine this trend with a decade-long decline in inpatient hospital care² and a whopping 30 percent of today’s healthcare spending is attributed to administrative costs,³ and it begs the cost-savings question: How can we deliver high quality healthcare to patients, without the need for an office visit?

“No one enters the healthcare system for the experience,” explained Scott Wallace of Dell Medical School at The University of Texas, Austin. “It’s not Disney or dinner out; it’s an experience that we endure to get someplace else. Care is an intermediate good. The ultimate goal is better health.”

“We’ve built our health systems around providing medical touch points and interventions in a traditional care setting,” explained Medtronic Director of Value-based Healthcare Strategy Jude Wimberger. “A certain kind of value is inherent with today’s system and each of these touch points has led to innovations in treatment options and improved outcomes. But it’s not the kind of value that’s based on a patient’s journey across a continuum of care. And that’s what needs to change.”

How can we collectively shift to care that strives for better health?

Experts agree that finding tools and solutions that empower an individual to contribute to the system — outside of the clinic — will play a major role in both keeping costs down and driving better outcomes. As a leader in chronic disease management — offering technology that senses, monitors, and delivers solutions for patients both in and outside the hospital setting — Medtronic is well-positioned to help healthcare professionals meet patient needs in new care settings.

“By looking at treatment options and coordination across a care continuum, we can learn what a person needs and identify more efficient ways to get them access to the optimal care. Through data, tools, and increased care coordination, we can build efficient systems that are more patient-centric,” said Wimberger. “Focusing on value in this way has the potential to significantly reduce costs while the population prospers from smarter, connected healthcare.”

We are working with others to expand our remote monitoring and telemedicine solutions to further empower patients, treat more disease states, and develop systems for providers that reward outcomes over output.

References
In Part 1, we considered how patients can benefit from — and be part of — data-driven healthcare solutions. In Part 2, we focus on how data and technology can help providers and payers be more efficient and effective in delivering care.

Predictive analytics, big data, and deep learning can all provide actionable insights to patients, providers, and payers in today’s healthcare environment. From measuring clinical outcomes to spotting population trends, data is an objective partner in driving healthcare toward a more efficient, cost-effective future.

With an estimated 5 million medical notes created daily,¹ and 21 percent of Americans using wearables,² there’s no shortage of patient data. Yet, 65 percent of providers report not having the patient data they actually need during a patient interaction.³ Therefore, the key to building data-driven healthcare systems may be improving accessibility to the right data. A recent study at the University of Texas Southwestern found that big data, on its own, isn’t the solution providers are seeking. Most practitioners found that it was not all data but smarter data that helped cut down on patient readmission.³

“Predictive analytics present a great opportunity for a more effective health system. If we can use real-time data in combination with predictive analytics, we can identify patients for targeted interventions and improved health behaviors,” said Wimberger. “If we can do that consistently, we can be smarter and more focused with our resources.”

As the quantity of available data increases, so does the need for technology to help providers analyze and act on it. Medtronic collaborates with hospital systems and industry leaders to address the data needs of providers and how our technologies — current and future — can play a role in the patient-care pathway.

We recently announced a partnership with Mercy Health to integrate data analytics into care delivery.⁴ “Having the ability to study patient-care pathways and conditions before and after exposure to a medical device is crucial to understanding how those devices perform outside of the controlled clinical trial setting,” said Rick Kuntz, M.D., Senior Vice President of Strategic Scientific Operations at Medtronic. “To more effectively treat patients, we need a better understanding of how they are responding to treatment and what leads to better health. This model will lead to evidence-based insights for our clinical teams and better health for our patients.”

Another partnership, with IBM Watson Health called the Medtronic Turning Point program, shows how data sharing and analytics can improve patient care at the individual level. Using a Medtronic mobile app, blood glucose monitor, and an assigned health partner, Type 2 diabetes patients and their physicians are provided critical data that helps with the planning, tracking, intervention, and follow-up required to manage the disease and improve outcomes.⁵ IBM Watson Health’s cognitive computing capabilities provide risk stratification and additional insights to both patients and providers.⁶

The effort to make data work for the healthcare system is ongoing. Through our Hospital IT Advisory Board and other outreach initiatives, we continue to learn what data solutions matter most to providers, hospital administrators, and payers.

References
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² Forrester: https://go.forrester.com/blogs/15-09-28where_would_the_wearables_market_be_without_smartphones/
⁵ https://www.medtronicdiabetes.com/blog/medtronic-turning-point-for-high-risk-diabetes-patients/
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In Parts 1 and 2, we addressed how smart, coordinated data technology can help patients and providers. Here, we share the direction Medtronic is taking to develop data solutions that are helping to create a more efficient system and improve patient outcomes.

Transitioning to a value-based healthcare system requires coordinated effort from all stakeholders — a trusted partnership that functions fluidly across healthcare providers, payers, and patients. For Medtronic, addressing issues that are slowing the transition and unlocking the full potential of our data-driven technology are key steps in the process.

“Providing products and systems that help doctors and stakeholders with efficient data integration is a massive undertaking for the healthcare community,” said Wimberger. “With value-based healthcare at the core of many initiatives at Medtronic, a strong focus on data integration stands at the forefront of our vision.”

Working with our partners across the care continuum, we are broadening our innovation horizon based on their needs. With the latest version of our insertable cardiac monitor, for example, smart filtering works to alleviate data overload for providers. By improving the algorithm within the heart monitoring device through self-learning, new technology simplifies data and usability, cutting false detect rates by nearly half — ensuring the alerts that providers receive are more accurate and clinically actionable.¹

Providing tools to patients that help with their day-to-day disease management also benefits providers and the broader system.

“While efficiency for the physician is incredibly important, it’s also essential to focus on how we can empower the patient as well,” said Wimberger. “Because the success of VBHC relies heavily on an improved care continuum, Medtronic is putting the power of care into the hands of diabetes patients through tech-based offerings like CareLink.” Facilitating a stronger outpatient relationship, CareLink is a convenient software tool that allows patients with diabetes to collect information from their insulin pump and easily share it with their doctor for more effective, ongoing therapy management.

Arming both physicians and patients with data-driven health solutions, like CareLink, in non-traditional care settings shows great promise in the shift towards VBHC.

Diabeter, a Medtronic network of Type 1 diabetes clinics in the Netherlands, is focused on improving outcomes among pediatric patients in the region. Using an IT platform Diabeter has coined as the “VCare system,” patients, caregivers, and a multidisciplinary team of specialists have access to real-time patient data via e-dashboards, personalized emails, and physician alerts. Early clinic results show improved patient outcomes, increased capacity for providers to treat high-risk patients, and system cost savings.²

While Diabeter is one of many initiatives working toward VBHC within the health community, its integrated approach is becoming a sought-after standard across Medtronic — and the industry — as we collectively look to advance a global VBHC healthcare model.

“Continuing to build smart products and strong partnerships, like the one we see with Diabeter, will become the backbone to building a more formidable healthcare system,” added Wimberger.

Learn more about how Medtronic is working to transform healthcare.

References