



New Frontiers For Innovation And Value In Medtech



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Health systems around the world are increasingly adopting value-based care (VBC) strategies in their efforts to restrain cost inflation and ensure the sustainability of health care provision. Nonetheless, progress toward fully integrated VBC remains tentative to date.

An important platform to accelerate the transformation to VBC is medtech innovation. Disruptive technologies such as digitally enhanced devices, data and analytics tools, or digital platforms and services can generate valuable patient-level, real-time data, providing insights into the patient journey and its cost-benefit components. In doing so, these new medical technologies can facilitate better clinical decision-making, patient-centric care and improved patient experience; inform quality improvement; and monitor and analyze costs – critical elements of VBC.

However, technology is only part of the story. It needs to be accompanied by a broader commitment to embedding VBC in health care, and by new, risk-sharing partnerships among health care stakeholders, with the common aim of delivering high-quality care, affordability and measurable benefits on all sides.

FINANCIAL STRENGTH

One factor that could harness innovation in support of VBC is a financially healthy medtech industry, with leeway to invest both in digital solutions and other drivers of value-based care. The sector has largely innovated or diversified its way out of a cycle of commoditization and pricing pressures. Now it is looking at sustained revenue growth.

“We think the industry will grow at 5–6% overall this year, and several large companies are growing at 8–9%,” pointed out Raj Denhoy, managing director of Jefferies & Company, at a Huron Consulting/ Informa Pharma Intelligence roundtable on *The Next Frontiers For Delivering Innovation And Value In Medtech*. “Demographics are still working in our favor, and the pricing environment’s not getting much worse.”

These conditions put medtech in a strong position to disrupt established approaches to health care delivery and payment. That will require, though, a sustained commitment to delivering measurable health outcomes.

“History shows that the health care industry moves through 20- to 25-year cycles, where a pendulum

swings between quality and costs,” observed Scott Tackett, vice president, global access, value and economics at Intuitive. “We just recently surfaced from a major economic commoditization cycle driven by costs and access ... A new innovation cycle is emerging and will have to build on itself and be sustained based on innovation designed to address challenges related to health care effectiveness. Until the overall medtech industry can demonstrate innovative technologies that address these challenges through delivering measurable outcomes in terms of improved patient outcomes, quality, satisfaction, care experience and reduce total costs to treat [in cost-effectiveness terms], there’s going to be a lag in terms of relevance.”

THE CASE FOR VBC

The unremitting pressures on health care systems, including rapidly aging populations, make a compelling case for VBC. In the UK, for example, “the projection is that we’ll need twice as many acute hospitals beds as we have now, even in 10 years’ time,” observed Richard Phillips, director, policy and communications for the Association of British HealthTech Industries.

Phillips also pointed to Japan. It has a top-heavy population but has addressed the challenge of age-related disease by treating it both as a care issue and an innovation driver. “They’ve got a dementia issue, but they’re embracing that, saying, ‘Let’s be the best country in the world at delivering dementia-friendly technology.’”

In some markets, convergence of health care providers is already encouraging a broader focus on value and outcomes. In Wales, for example, integration of previously siloed providers, such as acute hospitals and primary care, is “making it easier for them to have discussions about how care is delivered across a pathway,” Phillips noted. In England, programs like

Get It Right First Time are mapping the components of value in specialties such as orthopedics.

WHAT MEDTECH CAN DO

The medtech industry has already substantially adapted its business model to focus more on patient outcomes, cost-efficiency and quality of care. The more progressive companies are pursuing performance-based or risk-sharing agreements with payers.

Nonetheless, medtech could still take a more proactive role in innovating within the context of VBC, as well as a more active role in this ongoing transformation. As things stand, “value-based purchasing doesn’t really exist in many ways,” Denhoy pointed out. “Hospitals still want to do procedures, and they make money when they do them.”

Vested interests may prevail even where disruptive innovation significantly improves efficiency and cost-effectiveness. “The latest data in the UK say 184,000 people had unplanned hospital admissions due to untreated UTIs, and that cost the NHS £484,000,000 to treat,” observed Giovanna Forte, CEO of Forte Medical.

“We are talking about making Bluetooth sensors to go in urine specimens. They will ping the results to the clinician. But laboratories obviously don’t want to reduce the number of specimens they do by 70%, because that will reduce their turnover. I say, ‘Your client is the NHS, what about saving them money?’ They say, ‘That’s not my problem.’”

RESISTANCE AND MISALIGNMENT

Resistance to VBC within health care systems is amplified by cost-focused payment mechanisms, fragmented care provision or reluctance to fund

system transformation. “We went to payers with outcomes-based models and they said, ‘We’d rather just give you an amount every month,’” observed David Van Sickle, CEO and co-founder of Propeller Health.

Moreover, incentives for VBC may not be aligned across the range of health care stakeholders. “The industry has struggled to identify where value sits and what it means to various stakeholders [patients, physicians, hospitals, payers and policy-makers] and how to optimize it,” Tackett said. “Patients define value as access to high-quality medicine that delivers on a highly valued patient experience and at the heart of it is an outcome on the improvement of their overall health and getting through their medical issue quickly, with less pain/discomfort and doesn’t present a huge financial burden that is carried forward. Payers, of course, want to mitigate their risk exposure given their obligations and guide

patients to health care providers where patients experience strong access to high-quality cost-effective care – but costs are continually being analyzed – as relevance and effectiveness has become the focus.”



Digital is now key to the medtech product mix, generating data and insights that can drive better clinical decision-making as well as supporting and empowering patients in managing their disease and reducing unnecessary health care utilization.

Stakeholder alignment is also imperative if value is to be distributed equitably in forward-looking health care systems, especially where VBC mechanisms such as pay-for-performance shift more risk to providers or suppliers. “I’ve seen many cases where you may be getting better outcomes at a low-rate value, but you are taking economics out of one bucket and essentially putting it into another,” noted Huron managing director John Westwood.

Where digital or other disruption is tied to efficiency gains, stakeholders must be clear about where value is realized, and its implications for resourcing. “You see this in medical imaging,” commented Randy Clark, president of the Medical Systems Group, Olympus Corporation. “You can obsolete the necessity for a medical physicist or dosimetrist. The value that you’ve unlocked in doing that is a barrier. Does the hospital keep it? Does that insurance company pay less for radiation oncology treatment?”

DIGITAL ADOPTION IS SLOW TO BUILD

If the medtech industry is already significantly invested in value-based care, it has also taken the digital revolution to heart. Digital is now key to the medtech product mix, generating data and insights that can drive better clinical decision-making as well

as supporting and empowering patients in managing their disease and reducing unnecessary health care utilization.

At the same time, digital adoption has been relatively slow to build in the life sciences compared with more agile sectors such as banking. The pharmaceutical industry, for example, is “underestimating, and under-investing in, digital to date,” Van Sickle noted.

“Dollar investment to change the mobile banking experience vastly outweighs the effort and resources pharma is putting into the experience of a disease like COPD,” he added. Meanwhile, digital specialists like Amazon are entering the field without preconceptions and with an aggressively disruptive strategy.

One problem, Phillips suggested, is that medtech regulators are nervous about the pace of digital change in an already dynamic environment. “Our sector iterates over 12 to 18 months, not 10 to 12 years like a pharmaceutical product. When you get into digital innovation, it’s going to iterate instantaneously with every piece of information that goes in.”

DIGITAL AS A VBC DRIVER

The roundtable did uncover some evidence of how digital is further disrupting the medtech business model. It is pushing companies to rethink the way they do business and move from product to therapy-area strategies, and from a single point of intervention to a more holistic VBC approach that “owns” the disease continuum and patient journey. One small step in that direction is a contract between Johnson & Johnson and the US state of Michigan, whereby Medicare and Medicaid patients

self-report the outcomes of medical products, procedures or services via iPhone.

“It’s going to take some time to go from pilot to rollout to the whole population,” noted Sanjoy Roy, J&J’s director, global health economics and market access. “But if these guys are really picking up what is happening in terms of just hospitalization after procedures, they will start finding out where the value is.”

There is also a role for digital in shifting the emphasis of health care from treatment to prevention, specifically by monitoring, and collecting data on patient behavior in real time. Translating that into healthy behavior, though, implies something more coercive – albeit an approach already applied to some extent in large corporations.

“Surely, they will get data indicating whether or not patients are doing things to exacerbate or improve their recovery, rather than influencing patients’ behavior to ensure they get better?”, Forte commented. As Roy pointed out, though, “most companies [in the US] are already telling employees to disclose if they smoke. If they do, they pay more insurance. That’s the lowest-tech example of how you’re changing behavior.”

LEVERAGING THE DATA BOUNTY

One considerable asset that digital innovation brings to the VBC table is its ability to amass, analyze and mobilize significant volumes of data on health trends, economics, inputs and outputs. “So many things can influence an outcome,” Phillips said, citing the Get It Right First Time program. “It might be a hip, the time the patient is referred, the quality of the surgeon, the follow-up. To deliver that, you need a load of data, and we’ve got a load of data in orthopedics.”

New digital platforms “have given us the opportunity to see real-world, real-time evidence that we didn’t have before,” he added. “That can feed into getting those interventions in and creating a better vehicle to deliver value-based care.” The challenge is to use that evidence in a meaningful way to inform clinical decision-making, enhance the outcomes and quality of care, reduce costs and drive efficiencies.

For this data bounty to direct and substantiate VBC, though, there needs to be stakeholder consensus on identifying and standardizing appropriate, verifiable metrics. “One of the challenges is not only knowing how to capture and standardize the data, but how you agree on the metrics by which you can measure success,” Westwood emphasized. “That is very variable according to the type of setting you’re in.”

There is also “a time dimension to outcomes,” Tackett said. “A cancer goes into remission as a result of an intervention, and you accept a 12-month remission. Maybe in 18 months there’s a recurrence. So was the outcome good or bad?”

VALUE IN INNOVATION

Ultimately, the whole concept of medtech innovation needs to emphasize value from the bottom up. “If you look at how companies brought things to market 10 years ago,” Clark said, “they prided themselves on R&D: being at the forefront of developing a technology, bringing it to market and then retrospectively saying, ‘What’s the value proposition?’”

At Olympus, “we have completely redesigned our stage-gate process,” Clark added. “In development at Stage Gate 1, if you don’t have a value proposition, or a strong health-economics hypothesis, you don’t get the funds to go through with it.”

Once again, data, with digital technology as an enabler, are central to this revised approach. Roy identifies at J&J a “newfound interest and excitement in evidence. I won’t say we never invested in evidence, but the pace of it, and the willingness for the most senior parts of the company to get behind that, is a pretty significant change for our organization.”

OPEN INNOVATION

If the medtech industry really wants to optimize digital innovation as VBC, though, it needs to take a closer look at its own business practices. Any radical changes will have to take into account internal inertia, investor conservatism, the increased risk-sharing inherent in VBC and the very different pace, culture and context of digital creativity.

One potential catalyst might be open innovation, suggested Sotiris Rompas, a director at Huron. “If you look at what’s happening with the automotive industry, trying to get to autonomous cars, they realize it’s a huge infrastructure problem ... Do you see an open-innovation model in the medtech industry? You talked about metrics, measures: obviously, you’re in different disease categories and product categories.”

As Rafael Torres, senior vice president, business development and strategy at Varian Medical Systems, pointed out, vigorous digital competition may not always be the best way forward. “Every time we talk to payers or hospital administrators, they have a lot of examples to describe the same thing. Is that efficient?”, he asked. “You have thousands of these technologies out there, and payers are taking active measures: they go for a select few, because a lot of technologies are doing the same thing.”

Tackett saw in some disease areas indications of convergence around open innovation, albeit

with questions still to answer on distribution of value and associated rewards. “Look at diabetes: digital systems coming out with CGM (continuous glucose monitoring) providers, pumps and algorithms in the middle,” he pointed out.

“But again, one of the biggest struggles with that is, if it does unlock value in terms of patient outcomes and incremental cost effectiveness, who captures that? Is it the CGM providers, the pump providers or whoever makes the enabling algorithms? There’s no payment system in place yet to cover these total systems.” That further underlines the need for new models that align incentives in VBC, so that all stakeholders are working together, in a common mission, toward the same goals.

PREEMPTING COST CONTROLS

As was evident from the roundtable discussions, change is coming in both digital and VBC. But it needs a strong, evidence-based roadmap to transition from principles and promise to broad-based adoption. If industry is not proactive in drawing that roadmap, it could face draconian action on costs as health care spending reaches saturation point.

In the US, “the reality for all of us as taxpayers is 19% of our US GDP is spent on health care, going higher every year,” Tackett noted. “At some point, there is likely going to be a reckoning as this rate spend is unsustainable ... That could mean that



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– Giovanna Forte**

big government says, ‘This is how it’s going to change: we’re simply going to pay everybody less for everything you do, and you guys figure it out; this is where innovation steps in.’”

For all the technical, strategic, systemic or cultural obstacles to leveraging digital innovation as a VBC driver in medtech, there was optimism at the roundtable that industry is heading in the right direction. “I was speaking to a large tech device company, and they have connected their devices to hundreds of millions of people in the US,” Roy commented.

“You can opt to share your health data with them,” he continued. “It is going to take three, five years maybe, but

eventually things will come pretty quickly. You’re going to have enough data to evaluate what the value is of each of our procedures.”

In the meantime, companies need the courage and foresight to keep pushing back against internal or external resistance, and harnessing innovation to embed VBC as the bedrock of modern health care. Digital could be the motor for radical transformation.

“Before you can have evolution, or even a revolution, you need disruption to challenge the accepted way of thinking,” Forte commented. “If everyone just carries on the accepted way, money gets wasted, patients don’t get better, and things don’t change.”

CALL TO ACTION

A number of key action points emerged from the roundtable discussions:

- Pushing for regulatory change that acknowledges value and digital innovation as integral to product development.
- Looking to other industries for lessons in open innovation and big-data leverage.
- (Re)aligning internal medtech resources and capabilities with the challenge of enabling customers to achieve true VBC.
- Thinking about whole disease states and population management, rather than discrete product benefits.
- Defining metrics for VBC success in collaboration with stakeholders.
- Challenging existing models of partnership, so that health care stakeholders can take on more financial risk and achieve greater efficiencies in delivering care.
- Aligning different stakeholder incentives in VBC to ensure that everyone is working toward common goals.
- Refocusing sales forces on value-oriented offerings, while maintaining their traditional role of selling products: this might involve more emphasis on solving problems that inhibit value-based care.
- Embracing preventive health to improve outcomes.

ABOUT HURON

Life science companies face a rapidly evolving landscape, leading to strategic opportunities as well as challenges and disruptions that require new ways to approach the market. Huron's Life Science practice is part of Huron's broad continuum of healthcare offerings supporting the development and commercialization of innovative products and services.

At Huron, we work with medtech, diagnostic, biotech and pharma companies and investors to address their most complex business issues. We have supported clients in various ways to drive growth and meet their business objectives, including:

- Developing winning strategies and new innovative business models that go beyond individual products and capabilities
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- Harnessing the power of new technologies and approaches, such as digital solutions, use of real-world evidence and analytics, and companion diagnostics, to add value to the portfolio

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