

Is Canada Ready to Partner for Value-Based Healthcare?



COMMENTARY

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ABSTRACT

Global experience demonstrates that the transition of healthcare systems towards better value requires the collaboration of multiple actors, including health industry. Globally, several initiatives are already demonstrating the power of value-based partnerships between public and private sectors.

This paper will explore how international healthcare systems are evolving to adapt to a new value-based framework and will highlight the role of the private sector. The paper will also provide some examples of successful projects in Canada and abroad. Health systems in Canada are strained. Is Canada's healthcare system ready for these innovative collaborative approaches with industry?

Introduction

Healthcare systems globally continue to move toward value-based healthcare (VBHC) as a model to improve healthcare outcomes and ensure they get a better return from their healthcare dollars (Das 2018; Mahendraratnam et al. 2019; Waldron 2019). This mindset has been permeating reimbursement, funding, procurement and care delivery models in both developed and

developing countries (Americas Market Intelligence, 2019; Gelb Safran and Higgins, 2019; Sharma and Zafra 2019). The shift has been challenging health policy makers, administrators and clinicians alike – who must now look for better ways to collect and use evidence. New data can better enable a focus on the total cost of care rather than episodic costs, and encourage health systems to create new partnerships and delivery models. As

health systems gain more experience in VBHC models, it is becoming evident that collaboration is key to success (Horne et al. 2019). From our experience, healthcare systems that have partnered with providers and industry have a greater likelihood of achieving better results, faster than those systems that have gone alone.

Like public healthcare stakeholders, medical technology companies have been evolving to adapt to VBHC models. Medical technology companies provide devices and solutions that can help prevent, diagnose, monitor, treat and care for patients for countless medical conditions (Medtech Europe 2018). Historically, medical technology companies have provided technology to healthcare providers with the hope to improve the outcomes for patients based on evidence generated during clinical trials. There was little accountability for medical technology innovators to deliver the outcomes they claimed their technologies would deliver. As data is becoming more available to governments (payers); and providers are expected to be more accountable, medical technology companies are increasingly experimenting with new business offerings that enable risk-sharing with providers. This is a different paradigm from the status quo in which those in the value chain are rewarded solely based on activity.

Medical technology innovators are refocusing their technology and solution offerings within a VBHC perspective. Given current health systems' emphasis on better results, a promise of better performance is not always enough; in many cases, the current expectations require proving superior performance in the real world – and some companies are willing to go at risk to demonstrate that their products and services lead to better results. This new focus requires new knowledge, skills, tools and capabilities.

For example, VBHC roles and expertise within the medical technology industry were rare three years ago but are now the norm at leading medical technology companies trying to differentiate based on superior outcomes.

Global Trends to VBHC

In the US, Accountable Care Organizations (ACOs) have emerged as champions of VBHC. In 2007, a report presented to Congress acknowledged that health reform efforts to date were largely focused on individual providers and that a new model – ACOs – was required (Fisher et al. 2006). There was broad recognition that measuring individual hospital provider performance was not enough to improve outcomes at a lower per capita cost. There are many confounding factors that impact people's health outside the hospital, including the availability of skilled nursing, home care, personal support workers and social determinants of health. To address these realities, ACOs have proliferated. In 2009, there were 21 ACOs; and by the end of the first quarter of 2018, there were 1,011 insuring approximately 33 million people (Muhlestein et al. 2018). Instead of an individual provider approach, within ACOs, groups of healthcare providers are now accountable for outcomes and costs for a defined population (Bleser et al. 2018).

In addition to ACOs, the US is also taking strong steps to modernize reimbursement to drive greater collaboration across providers. For example, the Bundled Payments for Care Improvement Advanced Model (BPCI-A) is a voluntary program that is paying providers based on episodes of care or in a bundled payment rather than on a fee-for-service (FFS) basis. As of November 2019, there were nearly 1,300 participants in BPCI-A initiatives across the US (Centers for Medicare and Medicaid Services 2018). BPCI-A provides a single retrospective

bundled payment for 31 in-patient procedures and four outpatient procedures. The bundled payments generally are intended to cover the cost of an acute episode plus any pre- and post-intervention care. In some instances, there are penalties for subsequent admissions in the defined time frame of the bundle (Centers for Medicare and Medicaid Services 2018). This new financial incentive structure can create a platform for physicians, nurses, community health partners, pharmaceutical companies and medical technology companies to work together to deliver the best possible outcomes for patients within (or even less than) the bundled price.

Data and evidence generation – required for VBHC – within a fast-paced environment requires collaboration between the public and private sectors; and when this occurs, patients and the health ecosystem benefit. For example, in the US, Centers for Medicare & Medicaid Services (CMS) has made cost and outcomes data available in a timely manner to BPCI-A participants.

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Similarly, European health systems are moving to value-based models by leveraging data to make changes to reimbursement. For example, France now favours the reimbursement of dual mobility hip bearings – a hip prosthesis designed for a wider range of motion compared to fixed bearings which are cheaper and more widely available. Although the first type of hip prosthesis is more expensive, it has been associated with

fewer dislocations, revisions and death, resulting in lower total healthcare costs and more life-years, a better quality of life and significant societal economic gains (Epinette et al. 2016). The alignment by payers and providers on value, informed by transparent cost and outcomes data, can facilitate a more constructive partnership between providers and technology companies. When these data are shared, only then can technology providers fully understand where they can provide additional value.

Medical Technology Industry – More than a Device

Medical technologies are increasingly smarter, smaller, simpler to use and connected. The inherent disruptiveness of medical technology will need to be considered carefully as new care models are designed. Medical devices will increasingly challenge both how and who (type of provider) are administering the technology. Additionally, medical devices will collect new data elements that can help provide meaningful insights that are not currently available to providers today. These new realities will require a new paradigm of collaboration between healthcare providers and the medical technology sector. The more mature the collaboration between healthcare providers and the medical technology sector, the more exciting the possibilities and the higher the reward.

For example, partnerships between hospitals and industry in Europe have resulted in significant innovations and gains for patients and providers. Maastricht University Medical Center, a 700-bed hospital in the Netherlands, engaged in a partnership with industry that aimed to position its Heart+Vascular Center as one of the top 20 Best in Class cardiovascular centers in Europe by 2020 through optimizing infrastructure, technology, technical capability and care

pathways. The creation of a one-stop-shop for cardiac care resulted in reduced diagnosis time from two months to two hours, increased patient capacity and access with fewer staff, 30% fewer ultrasound and echocardiographies and decreased open heart surgery cancellations by half – all of which translate into \$2.5 million in annual cost savings to the provider Maastrich University Medical Center (Integrated Health Solutions 2014). Other European, Latin American, Asian and US hospitals are also embracing VBHC models by partnering with industry to address clinical areas that give them competitive advantage, stronger reputation, improved ability to attract new patients and increased revenue and research dollars (Makdisse 2018).

Canada has also begun to take meaningful steps in the journey to VBHC through innovative partnerships with the medical technology sector. The Ontario Government catalyzed the shift toward value by supporting and encouraging procurement models that can enable the healthcare sector to articulate their needs; it also opened opportunities to the private sector to offer innovative solutions (Ontario n.d.). Southlake Regional Health Centre was one of the first hospitals in Ontario to benefit from this support with success: it was able to create an accountability framework that included a Warranty Patient Outcome to incentivize better heart failure management results. Southlake saw the following improvements in the first year alone:

- 9% improvement for Congestive Heart Failure (CHF) readmissions
- 2% improvement in CHF length of stay
- Target achieved of 7 days wait time for access to a heart function clinic

There were other impressive results as well. Southlake was able to develop a heart failure patient pathway; CHF Lean savings of

\$162K; and increased use of the Cath Lab and Cardiac Short Stay unit (HealthPRO 2019).

While this innovative approach is in its early stages, it is a significant first step in having providers tender for solutions to their problems as opposed to specific technologies.

Other hospitals in Ontario, New Brunswick, Newfoundland and Labrador and Quebec are also embracing value-based opportunities with the medical technology sector. In 2016, Medtronic and the New Brunswick Heart Centre (NBHC) established a five-year partnership that sought to create a new relationship that looked at improving outcomes. Instead of a typical approach to the medical technology market, NBHC wanted a partner to assist them to deliver the following:

- Increased OR capacity through wait-list management, OR slate scheduling, enhancements to the transcatheter aortic valve implantation (TAVI) program and 90th percentile patient review
- Reduced OR cancellations through OR slate scheduling and cancellation standard work
- Reduced average length of stay (ALOS) in the ICU through reducing unnecessary bed days for all ICU patients and fast-tracking eligible Cardiovascular surgery (CVS) patients to the nursing unit
- Reduced ALOS on the step-down unit (SDU) through the discharge promotion board (day of surgery admissions [DOSAs]) and repatriation to the home hospital or referring site (Medtronic 2017)

This approach was a significant departure from the traditional transactional approach that is common in medical technology company-provider relationships. The medical technology company was expected to not only deliver technology, but to provide expertise in its approach to care process optimization

and to build on best practices they have been exposed to globally – this is a very different collaborative model. While a long way from a fully realized VBHC model, this new collaborative approach focused on outcomes as opposed to specific technology and has borne some significant improvements. Within one year, NBHC observed the following improvements:

- OR capacity increased by 14%
- Median recommended maximum waiting time (RMWT) reduced by 44% from 118 days to 66 days
- 90th percentile RMWT reduced by 31% from 283 days to 195 days
- Increased bed utilization through reduction of post-op ALOS by 7.1%
- Return on investment has exceeded expectations and is expected to continue improving over time

This progress, although positive, has taken a decade to materialize in Canada but does show the value of more sophisticated partnership models between providers and the medical technology sector. (Horizon Health Network, 2017)

Data-Driven VBHC Partnerships

The next frontier for VBHC is to focus on data and analytics. Pairing real-world patient data with administrative data in real time with advanced analytics can enable models to assess risks and optimize care in a way that was never possible before. This is at the core of recent VBHC partnerships that are already showing great promise. For example, Lehigh Valley Health Network (LVHN) in Pennsylvania signed a five-year agreement with Medtronic to develop and deploy value-based programs that take shared financial accountability for improving patient care and reducing the total cost of care when the

appropriate Medtronic technologies and therapies are aligned to the right cohort of patients at the optimal point in the care pathway.

For example, the first initiative that LVHN and Medtronic tackled was related to adverse events for patients who received pain medication after surgery – a condition commonly referred to as respiratory compromise (Frederickson and Lambrecht 2018). “The program deconstructed every step of a patient’s post-surgical journey through the hospital. It also looked at a patient’s journey when they receive opioids for pain management. Then, teams of data experts built the new care pathway. Using electronic health records, they developed a step-by-step-system of best practices that identifies at-risk patients, groups them into cohorts, and automatically enters them into a monitoring protocol” (Medtronic 2018b). As a result, more than 80% of patients who have been identified as having a high risk of an adverse event now automatically receive capnography technology that can help notify providers of an oncoming adverse event. Early results are showing a downward trend in complications associated with respiratory compromise at LVHN (Medtronic 2019).

This partnership has centered on demonstrating improved outcomes and the economic value of therapies on clinical areas of significant importance for the health network. A key success to this partnership is the ground-breaking approach to data analysis – which includes both hospital as well as device data, paired with advanced analytics to stratify populations – that drives clinically informed and objective decision-making and supports continuous improvement of clinical interventions (Medtronic 2018). This approach has been so successful for LVHN in programs like Enhanced Respiratory Monitoring that they have recently engaged in similar agreements with IKS Health and CVS

Health to, respectively, optimize physician and pharmacy processes (IKS Health, 2019; Nixon 2019).

Engineering these partnerships takes art and science, but it is possible for public and private sectors to partner to jointly implement the right therapies, for the right patients, at the right time, and have shared financial accountability for the clinical and economic outcomes. Trust is at the centre of success for these partnerships. Both partners need to be committed to the joint vision, agree on the right operational support and have visibility to the clinical, quality, operational and economic results. This close collaboration creates value for both partners, and more importantly, creates meaningful value for patients. In Canada, Medtronic is now offering the TYRX absorbable anti-bacterial envelope (which has been shown to reduce the chances of infection among high-risk patients by 70–100%) to hospitals within an outcomes-based arrangement – helping drive shared savings across the healthcare continuum (Tarakji et al. 2016).

Taking Canadian Healthcare Further

The opportunities for Canada are significant; however, establishing partnerships to increase value requires a shift in mindset, which has been slow in Canada's healthcare system. In order to drive change at scale where it will meaningfully improve outcomes or spending, it will take bold leadership and a commitment from policy makers to make VBHC a priority. VBHC in Canada is still piecemeal: there are pockets of integrated practice units; there is some patient-focused outcomes measurement; and there is work under way by organizations such as the Canadian Institute for Health Information (CIHI) and provincial agencies to share health system performance indicators.

The challenge is to create a systematic framework to ensure patient outcomes remain at the centre of health systems in

Canada – VBHC has the potential to be the guiding north star. As the experiences in other jurisdictions demonstrate, coalescing around this central theme, industry can, and should, partner with the public sector to jointly manage technology, enhance productivity, optimize care pathways and improve the patient experience; all of which would help elevate healthcare to the next frontier.

One of the stumbling blocks has been the limited capacity of Canada's healthcare system to measure outcomes, which medical technology companies can help address. The medical technology sector has been investing in developing data platforms and advanced analytics that could be leveraged in Canada. A more collaborative culture, joint governance models between providers and medical technology companies and innovative data agreements on patient outcomes and associated costs would create the right ecosystem and a more mature value-based framework of thought to continue growing VBHC platforms in Canada.

These new models will require a change in approach and should begin with the following;

- **Embracing new public–private partnership models:** a cultural shift within health systems from one that is averse to public–private partnership to one of trust and mutual respect. This will also require a new approach to procurement policy – one that moves away from tendering for equipment to one that looks for solutions to problems.
- **Emboldened clinical leadership:** Canada has some of the best and brightest medical minds in the world. We need them to lead the change for these new partnerships to materialize and work closely with patients and industry.
- **Aligned incentives:** many early initiatives to move to a more value-based world have been piecemeal as opposed to systematic.

We need to ensure that new models are enabled by looking at the incentive issues comprehensively and include all stakeholders in that process. New incentive structures should encourage risk sharing across stakeholders and enable both upside and downside opportunities.

- **New skills and training:** policy makers and administrators should look at how we train clinical and administrative leaders in healthcare and encourage more focus on leadership and change management within complex systems. The business of healthcare in Canada and applied research should be at the centre of this new skill-building initiative.

The medical technology sector is ready to be an accountable partner and bring innovative thinking, skills and tools to help transform healthcare in Canada. Is Canada's healthcare system ready to take on this opportunity?

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