The Harvard Contest That’s Trying to Improve Health Care Delivery

BY RICHARD G. HAMERMESH, ROBERT HUCKMAN, BARBARA McNEIL, JOSEPH NEWHOUSE, AND CARA STERLING

In the fall of 2014, the HBS-HMS Forum on Health Care Innovation launched the inaugural Health Acceleration Challenge — a “scale up” competition that focuses on compelling solutions to problems in health care delivery that have already been implemented at a small scale and have the potential for wider dissemination.

The contest produced some useful innovations. Many of them are easily adoptable by other organizations, proving our assertion that there is no shortage of innovations in health care; rather the problem is that they take too long to be adopted by others.

There is a large body of research on the factors that make the diffusion of new innovations difficult in the health care industry, including:

- How the innovation is perceived (e.g., Does it represent incremental change or require a large shift in thinking? Does the idea come from an established leader or an “outsider”?)
- The characteristics of the individuals who do or do not adopt the innovation (e.g., Are potential adopters risk averse or penalized for change?)
- The contextual and managerial factors within the organization (e.g., Is the innovation supported by leadership, management, incentives, and communication?)

The conventional wisdom is that it takes far longer for many potentially beneficial innovations to be widely adopted in health care than in other industries, especially consumer markets. An oft-cited example is the iPhone — more than 700 million have been sold since the first model went on sale eight years ago. By comparison it can take 10 to 20 years for a new health care practice to go from development to widespread adoption, according to some estimates.

The goal of the Health Acceleration Challenge is similar to that of this HBR-NEJM Insight Center: to serve as a platform to share proven innovations in health care in order to help encourage adoption across geographies, systems, and care-delivery settings.

Application questions focused on potential impact (e.g., What positive outcomes would occur if the innovation were disseminated more broadly?), evidence (e.g., What data exist currently that demonstrates success?), and the strength of the dissemination plan.

Altogether there were 19,965 visitors to the Challenge website who wrote 2,671 comments and provided 478 applications. These applications came from 29 different countries and 43 U.S. states. Approximately 60% were from for-profit companies, while the remaining 40% were from not-for-profit organizations.

More than three-quarters of the applicants were focused on provider-facing innovations, as opposed to those that directly addressed payors or patients. Of the provider innovations, 38% were aimed at acute care or hospitals, 14% on self-care, 1 on physician offices, 10% on telemedicine, 8% on home health care, and 20% on multiple or other settings.

To narrow down the 478 applications to 18 semi-finalists, we assembled a panel of 50 judges with wide experience in the field. The judges evaluated the applications based on potential impact, evidence of success, and the strength of the dissemination plan. Four finalists were ultimately selected. A winner will be selected in April 2016. (Click here to receive updates about this competition and the next Health Acceleration Challenge, which will begin in the spring.)

The four finalists represent a mix of for-profit and not-for-profit organizations, provider- and patient-facing innovations, and clinical and operational solutions. Each addresses a different problem in the health-care-delivery value chain and offers a unique approach that has been tested in the marketplace.

Bloodbuy. This Dallas-based company offers technologies that connect hospitals and blood centers nationwide to ensure the efficient flow of lifesaving blood products to patients in need. By providing on-demand access to a diversified base of premier blood centers, Bloodbuy ensures that hospitals avoid overpaying for blood products or encountering supply shortages. At the same time, Bloodbuy enables blood centers to reach and serve a broader base of hospitals and blood centers across the country, thereby increasing inventory turns, eliminating waste, and accelerating growth.

To date, Bloodbuy has produced average per unit cost savings of 20% on platelet orders, 24% on leukoreduced-red-blood-cell (LRBC) orders, and 27% on orders for fresh frozen plasma (FFP), when compared to the incumbent processes. On a blended basis, this equates to a net reduction of 22% in total blood spend. Bloodbuy has recently been featured on NPR’s Marketplace segment.

I-PASS Institute. A collaboration of over 50 faculty across the country, the mission of the I-PASS Institute is to improve patient safety by standardizing provider communication, with a specific focus on improving care transitions between provider shifts within the hospital. The institute’s members include Boston Children’s Hospital, Intermountain Primary Children’s Medical Center, and Oregon Health and Science University. The institute consults and trains clinicians to use the I-PASS Handoff Bundle, an evidence-based, standardized approach to teaching, evaluating, and improving handoffs. The I-PASS Hand-off Curriculum includes teamwork and communication training, simulations, a mnemonic to standardize handoffs, oral and written hand-off improvements, faculty-engagement tools, and an institution-wide sustainment campaign. The I-PASS mnemonic (Illness severity, Patient Summary, Action list, Situ-
 tightly integrated communication tools and can efficiently monitor key data and events from their population, allowing them to focus care on the right patients at the right time. Randomized controlled trials have shown that patient engagement increases and clinical intervention time decreases with the use of this application. For example, results show that three times the number of patients reach their outcome targets in a quarter the time of standard care with fewer office visits when using the Twine Collaborative Care Platform. All of these projects have stirred new thinking in the health care field. While we wait for the winner to be announced, we hope the discussion about innovations and how to speed their adoption will continue.

Medalogix. People aren’t dying the way they want to in America. Although 80% say they’d prefer to die at home, surrounded by loved ones, far away from needles and breathing tubes, only 25% get their wish. Not only is this terrible for patients and their families, it is also costing the health care system billions of dollars. In 2011, Medicare spent 28%, or about $170 billion, on patients’ last six months of life — and much of the spend not only did not extend patients’ lives, in many cases, it shortened them.

Nashville-based Medalogix has developed a technology, Medalogix Bridge, which leverages predictive analytics to identify hospice-eligible patients. Once identified, Bridge incorporates a workflow that helps clinicians better manage patients through the hospice-decision and transfer process. Medalogix offers solutions that use a combination of predictive analytics, workflow analysis, and business-intelligence engines to improve quality and reduce costs. Its products help decrease transfers to inpatient facilities as well as identify patients who would benefit from an additional care episode. In addition, its tools help identify and inform patients who would benefit from hospice care. You can watch the Tedx Nashville talk of Dan Hogan, Medalogix’s president and CEO, here.

Twine Health. This company is an MIT Media Lab spin-off with a population-health platform that enhances collaboration between patients and clinicians and empowers patients to take the lead in their care. The platform allows individuals with chronic conditions to co-create personalized care plans that serve as common ground for continuous collaboration with their care team: their own providers, their family and friends, and a coach (e.g., nurse, pharmacist, health coach). Care teams provide timely support through...
We live in a world where our personal devices—whether they’re in our pocket, car or home—can seamlessly share real-time data with each other. But the same cannot be said for a much more important area of our lives—healthcare. That’s because many of the systems that record and store healthcare data across the care continuum are not integrated. Erasing this so-called integration deficit is a critical next step in healthcare’s evolution as we transition to value-based healthcare.

While many stakeholders see the potential for improved collaboration, the misaligned incentives of many healthcare systems make the prospects for integration a significant challenge. Repeated tests, recurring readmissions, and an incomplete picture of a patient’s overall health are often the result. By working together to manage patient care holistically, the healthcare industry can improve clinical and financial outcomes.

So if the lack of integration is the problem, how do we start working toward a solution? More connected medical technologies—implanted and otherwise—can and should play a crucial role, as will better use of data to help healthcare professionals see a broader view of their patients. Today, many of Medtronic’s technologies are actively generating data, and we are working with the global healthcare community to take our technology, services, and insights and fashion them into solutions that either augment the delivery of care through better patient care management or improve overall system efficiency.

In the spirit of progress and partnership, our work includes:

- Utilizing insulin pump technology, sensors and mobile applications to better manage patients outside of the hospital setting in the Netherlands,
- Combining implanted heart failure technologies, diagnostic sensors, and nursing support to keep heart failure patients out of VA hospitals,
- Collaborating with IBM Watson to identify better care management for diabetes patients by using the patient’s own data,
- Working with hospitals to allow quicker patient discharges by giving doctors and nurses the ability to monitor patient care and progress remotely,
- Partnering with hospitals to manage their cath labs for better patient throughput and outcomes, and
- Working on-site at hospitals to drive improvements in efficiency, quality, clinical outcomes, and patient experience, all within an outcomes-based payment model.

As we’ve seen in our efforts, the successful integration of patient care will require collaboration between providers, suppliers, physicians and payers. At Medtronic, we believe we have an important role to play in the integration of healthcare. There’s an opportunity to harness the data and insights our technologies produce to create a more integrated, patient-centered healthcare system—one that ultimately is set up to achieve and reward the long-term outcomes that are central to a value-based healthcare system.

Learn more about our perspective on integrating care and value-based healthcare [here](#).