

Transformation of Healthcare Delivery in the Middle East

Medical technology and integrated care offer new solutions to the regions' changing healthcare landscape.

BY INGA STEVENS

With healthcare providers across the region under pressure to be more efficient, attention is now focused towards the growth capabilities that drive healthcare innovation and progress. The evident changes in the healthcare space—slowed healthcare spending, healthcare consumerism and application of healthcare IT—means that organisations are forced to anticipate change by responding with meaningful innovations at the therapy, procedural and organisational levels to market. Advances in medical technology and the adoption of integrated care models are increasingly being used to streamline healthcare systems with the potential to transform the way healthcare is delivered across the Middle East.

At the cutting edge of medical technology, developments in robotic-assisted surgery are forging new frontiers in the healthcare delivery continuum. Medical device innovation on this level is seen to offer better patient outcomes while maintaining or reducing overall costs and, with a number of MedTech giants announcing new product launches in the global robotic-assisted surgery market, this trend is set to continue.

Medtronic plc, the Dublin-based medical



technology, services and solutions company, recently released information about its much-anticipated robotics platform. The flexible platform will be used initially in bariatric, thoracic, colorectal, urology and general procedures, with Medtronic executives revealing that it will eventually be used in 'every type of surgical procedure done today'. The company expects the first surgical robot to launch before the end of the 2019 fiscal year and to start to generate 'material revenue' in fiscal 2019.

As Majid Kaddoumi, Vice President and Managing Director Medtronic explains, "This year

Advancements in MedTech are changing the healthcare sector.

alone we have invested \$1.6 billion in research and development to bring innovations that deliver better patient outcomes at appropriate costs, lead to enhanced quality of life, and can be validated by clinical and economic evidence. We hope that our breakthrough innovations such as our robotics platform will redefine the standard of care in markets such as here in the Middle East.”

Another of Medtronic’s breakthrough innovations includes the world’s smallest pacemaker, the Medtronic Micra. A game changer at less than one-tenth the size of traditional pacemakers, and comparable in size to a large vitamin, the Micra TPS provides the most advanced pacing technology available while being cosmetically invisible and small enough to be delivered with minimally invasive techniques through a catheter, and implanted directly into the heart. Micra is the result of a ten-year program at Medtronic called “deep miniaturization” with a goal to shrink medical devices by up to 90%. Scientists, engineers and designers at the MedTech giant succeeded in this goal by figuring out how to make a new generation of tiny devices that use only a fraction of the energy they once did. Micra is among the first of those new devices to reach patients.

The pacemaker, now available in the Middle East, was implanted in five patients for the first time in the region last year at the King Fahd Armed Forces Hospital (KFAFH) and Prince Sultan Cardiac Center (PSCC) in the Kingdom of Saudi Arabia.

“Pacemaker therapy is the most common way to treat bradycardia, a slow or irregular heart rhythm, by sending tiny electrical signals to the heart to increase the heart rate,” says Dr. Ahmad Alfagih, Consultant Electrophysiologists at Prince Sultan Cardiac Center. “The Micra device, which is small enough to be delivered with minimally invasive techniques through a catheter, and implanted directly into the heart, has the potential of reducing complications and recovery times observed with traditional surgical pacemaker implants.”

As Dr. Alfagih explains, unlike other traditional pacemakers, the Micra technology eliminates the use of wires, or “leads”, that connect traditional pacemakers to the heart which is hoped to make a major impact in terms of reducing device-related infections. Dr. Alfagih slams that “this is the beginning of the future for pacemaker therapy and will no doubt transform the way we care for bradycardia patients across the world.”

Medtronic has also announced several breakthrough solutions and new technology partnerships to provide meaningful insights, simplify diabetes management for providers and



people with diabetes. The company continues to expand its CareLink personal diabetes management software portfolio, helping physicians make confident treatment decisions and allowing patients to understand more about managing their diabetes effectively. With data, insights and analytics as the cornerstone of their diabetes strategy with CareLink, Medtronic has converted 125 million patient days of data into personalised insights that improve diabetes management.

Medtronic, along with its strategic technology partner IBM Watson Health, have advanced to the final development stages and revealed the name of a first-of-its-kind cognitive app—SugarWise™, with Watson. The first generation of the Medtronic SugarWise app is expected to predict important patterns and trends based on retrospective analysis of patients’ insulin, CGM and nutritional data—to help people understand how their behaviour affects their glucose level in real time.

The MedTech giant has also entered into a data partnership with Nutrino, a technology-based platform focused on diet and nutrition. MiniMed Connect customers will now have access to a new Nutrino app that combines CGM data with Nutrino’s science-based nutritional insights. The new app, currently in beta testing, will use Nutrino’s proprietary technology to give users a FoodPrint™ based on their daily food intake, activity, sleep and other parameters affecting their glucose levels.

“While our mission to alleviate pain, restore health, and extend life for people around the world has remained the same during the six decades of our existence, the nature of today’s healthcare problems requires a new approach,” Kaddoumi adds. “Our clients don’t just need clinical value from our therapy innovations; they needed economic value as well. By forging new, different and stronger partnerships, we are able to continue to drive progress in innovation and devise powerful solutions with proven clinical and economic value as the basis of our offerings and value proposition.”

The future of healthcare in the Middle East requires that both healthcare providers and medical technology companies embark on sustainable, innovative models of healthcare delivery. Although medical technology innovations, such as the world’s smallest pacemaker and the Medtronic robotics platform, are shown to facilitate better outcomes and represent smarter spending, it is clear that stronger partnerships that allow for value-based care will also be needed to deliver more seamless, integrated care across the healthcare continuum. 