Medtronic News

New Data Reveal Medtronic CRT Devices Improve Therapy Delivery and Reduce Healthcare Costs

Data Presented at EUROPACE 2017 Reinforce Cost and Outcome Benefits of Exclusive EffectivCRT(TM) and AdaptivCRT(TM) Algorithms, Along with Improved Device Longevity

DUBLIN and VIENNA - June 20, 2017 - Medtronic plc (NSYE: MDT) today announced new data showing that use of its cardiac resynchronization therapy (CRT) devices - with its proprietary AdaptivCRT(TM) and EffectiveCRT(TM) algorithms - results in lower healthcare system costs, and improves therapy delivery in heart failure patients who also have atrial fibrillation (AF). The results of three analyses were presented at the EHRA EUROPACE-CARDIOSTIM 2017 in Vienna.

Findings from a European health-economic analysis demonstrated that treating patients with AdaptivCRT results in lower healthcare costs and extends life expectancy by an average of four months. The findings, which span three countries' healthcare systems, showed that lifetime costs for patients treated with AdaptivCRT were lower than for patients treated with traditional pacing algorithms:

	With AdaptivCRT algorithm	Without AdaptivCRT algorithm
Italy	€28,113.00	€29,215.16
Spain	€29,618.89	€30,833.93
United Kingdom	€29,425.37 (£25,454.47)	€30,273.19 (£26,274.39)

The AdaptivCRT algorithm is available in the Medtronic Claria MRI(TM) Quad CRT-D SureScan(TM), Amplia MRI(TM) Quad CRT-D SureScan(TM), Percepta(TM) Quad CRT-P MRI SureScan(TM) and Serena(TM) Quad CRT-P MRI SureScan(TM) systems. It adjusts the way the device paces the heart according to minute-to-minute evaluations of each patient's rhythm, and leads to improved outcomes through reducing patients' odds of a 30-day heart failure readmission1 and their risk of developing AF2.

A second analysis - from the prospective, randomized CRTee study - showed that the Medtronic device-based EffectivCRT during AF algorithm improved effective left ventricular pacing by 19 percent (87±16 percent vs. 68 ± 37 percent; $p<0.001$) in patients with AF, compared to devices without the technology.

"It is exciting to see that this technology helps increase the amount of CRT delivered during atrial fibrillation," said Giuseppe Boriani, M.D., Ph.D., full professor of cardiology at the University of Modena and Reggio Emilia, Italy. "Many patients with heart failure experience AF at some point, and we now have the ability to better address the individual needs of these difficult-to-treat patients."

AF is one of the most common heart rhythm disorders. It involves an irregular quivering or rapid rhythm in the heart's upper chambers. A large percentage of heart failure patients receiving CRT also have AF3, which can significantly reduce patient response to the therapy. The EffectivCRT Diagnostic, exclusive to the Medtronic Claria CRT-D and Percepta CRT-P devices, automatically determines the effectiveness of left ventricular pacing, and the EffectivCRT during AF algorithm automatically adjusts pacing rates during AF.

"These analyses reinforce Medtronic's leadership in providing treatments and solutions that not only improve patient outcomes and CRT delivery, but also dramatically reduce healthcare utilization," said Kweli P. Thompson, M.D., M.P.H., vice president and general manager of the CRT business, which is part of the Cardiac and Vascular Group at Medtronic. "Beyond the clinical benefits of the AdaptivCRT and EffectivCRT algorithms, our newest devices with these features also demonstrate improved longevity."

Finally, the latest economic analysis of Medtronic CRT-defibrillators (CRT-D) demonstrated a highly significant increase in projected device longevity: up to nine (9) years for Claria and Amplia devices, and 8.1 years in Viva XT(TM) CRT-Ds, which are substantial improvements compared to predecessor models.

"By improving device longevity, there are substantially fewer device replacements and, in turn, significant cost savings and fewer procedure-related complications," said Haran Burri, M.D., Ph.D., associate professor of cardiology at the University Hospital of Geneva, Switzerland.

In collaboration with leading clinicians, researchers and scientists worldwide, Medtronic offers the broadest range of innovative medical technology for the interventional and surgical treatment of cardiovascular disease and cardiac arrhythmias. The company strives to offer products and services of the highest quality that deliver clinical and economic value to healthcare consumers and providers around the world.

About Medtronic

Medtronic plc (www.medtronic.com), headquartered in Dublin, Ireland, is among the world's largest medical technology, services and solutions companies - alleviating pain, restoring health and extending life for millions of people around the world. Medtronic employs more than 88,000 people worldwide, serving physicians, hospitals and patients in approximately 160 countries. The company is focused on collaborating with stakeholders around the world to take healthcare Further, Together.

Any forward-looking statements are subject to risks and uncertainties such as those described in Medtronic's periodic reports on file with the Securities and Exchange Commission. Actual results may differ materially from anticipated results.

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1 Starling RC, Krum H, Bril S, et al. Impact of a Novel Adaptive Optimization Algorithm on 30-Day Readmissions: Evidence From the Adaptive CRT Trial. JACC Heart Fail. July 2015;3(7):565-572.
2 Martin D, et al. Clinical outcomes with adaptive cardiac resynchronization therapy: Long-term outcomes of the Adaptive CRT Trial. HFSA Annual Scientific Meeting. September 23, 2013.
3 Kloosterman M, Maass AH, Rienstra M, Van Gelder IC. Atrial fibrillation during cardiac resynchronization therapy. Card Electrophysiol Clin. December 2015;7(4):735-748.

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