Medtronic News

New Medtronic Data Shows Health Care Utilization Differs by Type of Implantable Defibrillator Therapy

Studies Presented at Heart Rhythm 2010 Demonstrate Advantages of Advanced Shock Reduction Technologies

MINNEAPOLIS & DENVER, May 15, 2010 (BUSINESS WIRE) --Medtronic, Inc. (NYSE: MDT) today released new data from the MVP (Managed Ventricular Pacing) trial that implantable defibrillator patients receiving anti-tachycardia pacing (ATP) were less likely to have health care utilization after treatment as compared to those receiving shock therapy. Only 24 percent of patients who receive painless anti-tachycardia pacing (ATP) to terminate a potentially life-threatening arrhythmia visited the hospital, clinic or emergency room at least once within three days of receiving therapy, versus nearly 60 percent of patients who were treated with shock therapy. The findings were released at Heart Rhythm 2010, the Heart Rhythm Society's 31st Annual Scientific Sessions, as part of Medtronic's leading clinical portfolio to reduce appropriate and inappropriate shocks.

"This multicenter, international MVP Trial data shows the health care use burden and indicates that both appropriate and inappropriate shocks frequently are associated with hospitalization or urgent care visits," said Michael O. Sweeney, M.D., Cardiac Pacing and Heart Failure Device Therapies, Brigham and Women's Hospital in Boston.

Implantable defibrillators (ICDs) and cardiac resynchronization therapy-defibrillators (CRT-Ds) are 98 percent effective in stopping life-threatening fast or irregular heart beats, also known as ventricular arrhythmias, which can lead to sudden cardiac death. While the majority of lifesaving shocks are necessary, a top concern among implanting physician is the reduction of inappropriate shocks. These inappropriate shocks take place when an implanted device is unable to distinguish between life threatening and non-life threatening heart arrhythmias, or electrical noise within the device system, and a shock is delivered as a precautionary measure.

This MVP study analysis of 1,030 patients also shows that the percentage of appropriately shocked patients who sought medical attention within three days of a shock (56 percent) was similar to that of inappropriately shocked patients (61 percent). However, only 24 percent of patients who receive painless anti-tachycardia pacing (ATP) to terminate a life-threatening arrhythmia had health care use within three days of those treated episodes. Nearly 90 percent of health care utilizations from shocks or ATP included emergency room visits or hospitalizations.

Additional Shock Reduction Findings

New data on two other shock reduction programming strategy abstracts was released today at Heart Rhythm 2010.

- The Shock-Less study preliminary baseline data shows that physician use of evidence-based shock reduction programming strategies remains low and increased adoption is needed. Physicians' use of recommended device programming for shock reduction improved when their patients enrolled in the trial. However, the improvements still did not meet the desired level of adoption for these proven shock-reducing strategies.
- A prospective analysis shows the Medtronic-exclusive Lead Integrity Alert (LIA) reduced the percentage of patients with inappropriate shocks from lead fracture by nearly 50 percent when compared to patients without LIA.

First released in 2008, the Lead Integrity Alert provides advanced warning of potential lead fractures so the patient can seek medical attention, and reduces the risk of receiving an inappropriate shock. About 75 percent of patients with LIA will receive a three-day warning of a potential lead fracture before receiving an inappropriate shock. While the majority of inappropriate shocks are from supraventricular tachyarrhythmias (SVT), a rapid heart beat starting in the atria, a small percentage can be caused by lead malfunctions.[2]

"The Medtronic shock reduction data released this year at HRS confirms our commitment to delivering evidence-driven shock

reduction technologies," said Marshall S. Stanton, M.D., vice president of clinical research for the Cardiac Rhythm Disease Management business at Medtronic. "Our clinical studies show the clear benefit of and need for advanced technologies so patients can be reassured their device can precisely detect what arrhythmic episodes require life-saving shock therapy."

About Medtronic

Medtronic, Inc. (www.medtronic.com), headquartered in Minneapolis, is the global leader in medical technology - alleviating pain, restoring health, and extending life for millions of people around the world.

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.

1 DP Zipes, D Roberts, for the Pacemaker-Cardioverter-Defibrillator investigators. Results of the International Study of the Implantable Pacemaker Cardioverter-Defibrillator: A Comparison of Epicardial and Endocardial Lead Systems. *Circulation.* 1995;92:59-65.

[2] Poster: Poole JE, et al. Analysis of ICD Shock Electrograms in the SCD-HeFT Trial *Heart* Rhythm Society Conference. 2004.

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