Medtronic News

Landmark IMPROVE HF Study Shows Adherence to Outpatient Quality Measures Associated with Improved Survival in Heart Failure Patients

Study Published Today in Circulation is the First to Assess the Correlation of Seven Heart Failure Process-Based Quality Measures with Clinical Outcomes

MINNEAPOLIS, Apr 04, 2011 (BUSINESS WIRE) --

Results from the largest U.S. outpatient heart failure clinical study, published today in the journal *Circulation* and funded by Medtronic, Inc. (NYSE: MDT), demonstrate that select guideline-based outpatient heart failure process measures positively impact patient survival and may be useful for assessing and improving overall patient quality of care. Findings from IMPROVE HF (The Registry to Improve the Use of Evidence-Based Heart Failure Therapies in the Outpatient Setting), showed that most of the Class IA heart failure therapies measured, including implantable defibrillator therapy and cardiac resynchronization therapy, were linked to a lower risk of mortality. Specifically, compliance with the implantable cardioverter defibrillator (ICD) process measure in eligible patients was associated with 38 percent lower odds of mortality over two years, and cardiac resynchronization therapy (CRT) process measure compliance was associated with 36 percent lower odds of mortality.

"These findings are significant, as they offer the first real-world evidence suggesting that these process measures directly correlate with the quality of care provided to the millions of heart failure patients who are treated in the outpatient setting," said Gregg C. Fonarow, M.D., co-chair of the IMPROVE HF Scientific Steering Committee and Professor of Cardiovascular Medicine at the University of California at Los Angeles. "In addition, results of this study suggest that successful efforts to improve conformity with these outpatient heart failure process measures, should be expected to translate into a favorable impact on clinical outcomes."

Seven process quality measures were analyzed in the IMPROVE HF study, including use of drug therapy (ACE inhibitors or angiotensin receptor blockers, beta-blockers, aldosterone antagonists and anticoagulants for atrial fibrillation); use of implantable device treatments such as ICD, CRT with defibrillator, or CRT with pacemaker; and heart failure education. However, only four of the seven quality measures (ACE inhibitors, beta-blocker, HF education, and anticoagulation for atrial fibrillation) are currently recognized as standard heart failure performance measures.

The IMPROVE HF study is the first to assess the link between current and emerging heart failure process measures and clinical outcomes. Study results revealed that every 10 percent improvement in the composite care process (percentage of the total number of indicated quality measures that were provided to a patient) was associated with a 13 percent decrease in the odds of mortality during the 24-month follow-up period.

While there is a considerable gap in the integration of clinical trial evidence into professional guidelines and delivery of evidence-based care, professional and government-based organizations have worked to improve care among this patient population. As part of these efforts, standard, guideline-based process of care measures have been implemented in an effort to measure and improve overall quality of care among heart failure patients.

"Medtronic is dedicated to changing the face of heart failure via innovative medical technology that aims to provide improved quality of care among this growing patient population," said Pat Mackin, president of the Cardiac Rhythm Disease Management business and senior vice president at Medtronic. "We look forward to continuing to support clinical research initiatives that further validate these life-saving therapies."

About IMPROVE HF

IMPROVE HF is the first-of-its-kind, prospective study involving approximately 35,000 heart failure patients from 167 U.S.

cardiology practices. Using a process improvement intervention and chart reviews at baseline, six, 12, 18 and 24 months, IMPROVE HF was designed to quantify and improve quality of care for heart failure patients by promoting the use of evidence-based, guideline-recommended therapies. All study data were collected and analyzed by an independent clinical research organization.

The quality measures apply only to patients documented to be eligible for treatment according to current guidelines and without any recorded contraindications, intolerance, or other rationale for not treating.

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.

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