

REMOTE MONITORING OF IMPLANTED DEVICES SPEEDS CLINICAL DECISION-MAKING

Fewer office visits, shorter hospitalizations are added benefits

Atlanta, Ga. – March 15, 2010 - A wireless monitoring system that automatically sends information about an abnormal heart rhythm from a device in the patient's chest to the cardiologist's office significantly cuts the time between when a problem arises and a treatment decision is made, according to research presented today at the American College of Cardiology's 59th annual scientific session.

The research was presented by the study's national lead investigator, Dr. George Crossley, electrophysiology for Saint Thomas Heart at Baptist Hospital and Saint Thomas Research Institute in Nashville, Tenn. The ACC.10 scientific session is the premier cardiovascular medical meeting, bringing together cardiologists and cardiovascular specialists to further advances in cardiovascular medicine.

The Clinical Evaluation Of Remote Notification to Reduce Time to Clinical Decision (CONNECT) evaluated a wireless remote monitoring and notification system based on Medtronic's Conexus-enabled cardiac resynchronization therapy defibrillators (CRT-Ds) and implantable cardioverter-defibrillators (ICDs). The wireless telemetry system was compared with standard care, in which a cardiologist reviews information from an implanted device during an in-person clinic visit. The study showed that remote monitoring and automatic notification cut by nearly two-thirds the time to clinical decision-making.

"This system allows the clinician to better manage the patient's disease by making critical information immediately available," said Dr. Crossley. "By learning about clinical events earlier, we have the opportunity to intervene earlier, improve outcome and prevent disease progression."

Approximately 500,000 patients in the United States have a CRT-D or ICD. These devices are designed to treat heart failure and prevent sudden cardiac death. The use of remote monitoring for follow-up has the potential to improve both patient safety and healthcare efficiency. CONNECT is the largest randomized, prospective study designed to quantify these advantages.

For the study, researchers from 136 sites in the United States recruited 1,997 patients with an ICD or CRT-D, randomly assigning them to remote monitoring or standard in-office care. All patients were followed-up for 15 months after device implantation. Those in the remote-monitoring group were given a home monitor capable of receiving a wireless telemetry signal from the implanted device and automatically transmitting diagnostic information to the cardiologist's office over a telephone line, without any action on the patient's part. The devices were programmed to send routine information on a schedule determined by the cardiologist, and to immediately send alerts in the case of a worrisome development. Patients in the remote-monitoring group were seen in the office one month and 15 months after device implantation only. Patients receiving standard care were followed-up in the office on a fixed schedule, typically every three to six months, without remote monitoring.

Data from CONNECT showed a significant reduction in the time between the onset of a clinical problem and a clinical decision on how to manage it (29.5 days, on average, in the standard-care group vs.

10.5 days, on average, in the remote-monitoring group). There was also a significant reduction in the average length of hospitalization (4.0 days vs. 3.3 days, respectively), which resulted in an estimated savings of \$1,659 per hospitalization, on average, for patients in the remote-monitoring group.

“Although in our current analysis we were not able to determine the direct mechanism of this reduction in the length of stay, this is the first trial to show a correlation between remote management and significant positive changes to healthcare utilization,” Dr. Crossley said.

About the Saint Thomas Research Institute

Since 2000, the Saint Thomas Research Institute has worked with Saint Thomas Health Services’ four regional hospitals as a department dedicated to clinical research. The Research Institute advances Saint Thomas Health Services’ mission, working effectively with sponsors, physicians and patients to improve the health of the communities we serve. For more information about the Saint Thomas Research Institute, visit www.StThomasResearch.com.

About Saint Thomas Heart

In 2007, Saint Thomas Health Services launched Saint Thomas Heart, a combined entity that utilizes all of Saint Thomas Health Services’ heart services under focused leadership. The physicians of Mid-State Cardiology, with offices on the Baptist Hospital campus, and The Heart Group, located on the Saint Thomas Hospital campus, now practice under the umbrella of Saint Thomas Heart. This combined group of 60 heart specialists sees more than 130,000 heart patients in a 69-county region that stretches throughout Middle Tennessee and southern Kentucky in 22 clinics. www.heartasone.com.

Saint Thomas Health Services is a faith-based ministry with more than 6,500 associates serving Middle Tennessee. Saint Thomas Health Services' regional health system consists of four hospitals - Baptist and Saint Thomas in Nashville, Middle Tennessee Medical Center in Murfreesboro and Hickman Community Hospital in Centerville - and a comprehensive network of affiliated joint ventures in diagnostics, cardiac services and ambulatory surgery as well as medical practices, the Center for Spinal Surgery, clinics and rehabilitation facilities. STHS is a member of Ascension Health, a Catholic organization that is the largest not-for-profit health system in the United States. For more information, visit <http://www.sths.com>.