

Baylor Jack and Jane Hamilton Heart and Vascular Hospital Deploys New Device for Heart Failure Patients: “Smart Pillow” Monitoring

Wave frequency turns pillow into a monitoring device for heart failure patients.

Dallas, TX, September 15, 2015 --- Today, Baylor Jack and Jane Hamilton Heart and Vascular Hospital, together with cardiologists on the medical staff, deployed a pro-active personalized approach to managing heart failure by launching a new procedure for heart failure patients. Now, CardioMEMS™ Heart Failure System, a tiny, implantable device, is available to help certain patients and their physicians closely monitor heart failure symptoms and potentially avoid unnecessary medical visits. The minimally invasive device works together with a home unit and a “smart” pillow to identify increased heart failure symptoms often in the early stages.

Heart failure patients typically must carefully monitor their weight and blood pressure. Often, worsening heart failure will show an elevation in weight and blood pressure due to fluid build-up and retention. In addition, pulmonary artery pressure can also be elevated. The additional fluid build-up literally weighs heavily on the patient’s heart; causing an exacerbation in congestive heart failure. Medications must be adjusted as symptoms increase and often, patients don’t take action until seeking emergency attention, possibly leading to a hospital stay. By monitoring their condition daily with CardioMEMS™ Heart Failure System, the first and only FDA-approved heart failure monitoring device, patients are able to “alert” their physician as to their condition and corrective action can be taken up to three to four weeks prior to when the exacerbation of symptoms typically occurs.



“Even with good medications and appropriate dietary monitoring, patients can decompensate,” says Dr. Shelley Hall, a cardiologist on the medical staff at Baylor Jack and Jane Hamilton Heart and Vascular Hospital and Chief of Transplant Cardiology, Mechanical Circulatory Support and Heart Failure. “When this occurs, many heart failure patients experience excess fluid, high blood pressure, and inflammation. Patients may wait until a situation is nearly critical to seek help and may end up seeking emergency care. Monitoring conditions daily is a part of a proactive treatment plan for heart failure patients.”

After the device is implanted into the patient, the patient receives a pillow and an electronic unit for home. With education and training, the patient knows that it is important to lie on the pillow at approximately the same time every day, press a button on his or her monitoring unit, and listen for the pillow to “speak;” indicating that readings are successfully occurring.

Once the readings are finished, typically two to three minutes, the pillow tells the patient that the reading is finished. The “smart” pillow communicates via safe radio-frequency to the device implanted into the patient’s pulmonary artery. The implant has a micro-electronic medical system, or “MEMS” for short.



Andres Sisneros, Director of the Heart Catheterization Lab at Baylor Hamilton Heart and Vascular Hospital reports that the entire clinical team in the cath lab is excited for patients to experience this new technology. According to Andres, “We are pleased to bring this technology forward for our heart failure patients. We know that many patients struggle with heart failure management and long-term compliance with medications. This tiny device is implanted in our cath labs; taking seven to ten minutes to implant. Typically patients go home the same day.”



Heart failure occurs when the heart is unable to pump enough blood to meet the body's demands. According to the [Centers for Disease Control and Prevention](#), more than 5.1 million Americans have heart failure, with 670,000 new cases diagnosed each year. Patients with heart failure are frequently hospitalized, have a reduced quality of life and face a higher risk of death.

The CardioMEMS™ sensor is designed to last the lifetime of the patient and doesn't require batteries. Once implanted, the wireless sensor sends pressure readings to an external patient electronic system. There is no pain or sensation for the patient during the readings.

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CardioMEMS™ Heart Failure System allows the patients to transmit critical information about their heart failure status to a clinician on a regular basis, without the need for additional clinic or hospital visits.

Baylor Jack and Jane Hamilton Heart and Vascular Hospital sees these new devices and techniques as an alternative to medical management and a way to improve the quality of life for its patients with heart failure or congestive heart disease.

For medical professionals:

CardioMEMS™ has been F.D.A. approved and is indicated for Class III heart failure and for those patients who have had a hospitalization for heart failure within the past 12 months. Data from a clinical trial showed that the CardioMEMS™ technology reduces heart failure hospital admissions by up to 37 percent.

The CHAMPION trial studied the effectiveness of the CardioMEMS™ Heart Failure System in New York Heart Association (NYHA) Functional Classification System class III heart failure patients who had been hospitalized for heart failure in the previous 12 months. [Results of the trial](#) demonstrated a statistically significant 28 percent reduction in the rate of heart failure hospitalizations at six months, and 37 percent reduction in heart failure hospitalizations during an average follow-up duration of 15 months.

Roughly 1.4 million patients in the U.S. have NYHA Class III heart failure, and historically these patients account for nearly half of all heart failure hospitalizations. According to the [American Heart Association](#), the estimated direct and indirect cost of heart failure in the U.S. for 2012 was \$31 billion and that number is expected to more than double by 2030.

About Baylor Jack and Jane Hamilton Heart and Vascular Hospital

Baylor Heart and Vascular Hospital opened in 2002 as the first North Texas hospital dedicated solely to the care and treatment of heart and vascular patients. The hospital provides inpatient and outpatient services focused on preventive health care and comprehensive cardiovascular disease management. Designed as a patient-centered facility, features include both invasive and non-invasive cardiologic technology, imaging with 64-slice CT scanner, and cardiac rehabilitation. Baylor Heart and Vascular Hospital is located on the campus of Baylor University Medical Center at Dallas near downtown Dallas. For more information visit: www.Baylorhearthospital.com

Notice Regarding Physician Ownership: Baylor Jack and Jane Hamilton Heart and Vascular Hospital is a hospital in which physicians have an ownership or investment interest. The list of the physician owners or investors is available to you upon request. Physicians are members of the medical staff at one of Baylor Health Care System's subsidiary, community or affiliated medical centers and are neither employees nor agents of those medical centers, Baylor Jack and Jane Hamilton Heart and Vascular Hospital or Baylor Health Care System.

About Baylor Scott & White Health

Baylor Scott & White Health, the organization formed from the 2013 merger between Baylor Health Care System and Scott & White Healthcare, is today the largest not-for-profit health care system in the state of Texas. With total assets of \$9 billion* and serving a population larger than the state of Virginia, Baylor Scott & White Health has the vision and resources to provide its patients continued quality care while creating a model system for a dramatically changing health care environment. The organization now includes 49 hospitals, more than 800 access points, more than 5,800 active physicians, 35,000 employees and the Scott & White Health Plan. For more information visit:

BaylorScottandWhite.com

About St. Jude Medical

The CardioMEMS HF System, from global medical device manufacturer St. Jude Medical, is approved by the U.S. Food and Drug Administration (FDA) for commercial use in the U.S. For more information, visit www.heartfailureanswers.com.