

Living with advanced heart disease

New way of monitoring heart reduces hospitalization and improves quality of life



Patient Joseph Helfgot transmits data from his heart monitor to BWH.

JOSEPH HELFGOT is a marketing research consultant for the movie industry who travels extensively and maintains a busy schedule despite a history of heart disease. He has suffered one cardiac arrest, and cardiomyopathy has weakened his heart's ability to pump. He relies on an implanted defibrillator to maintain a normal heart rhythm. For Helfgot, paying attention to his vital statistics and getting the right balance of medications is critical. Now, an investigational device called Chronicle, pioneered by BWH investigators, is making it easier.

Implanted in Helfgot's chest, the credit-card-sized monitor tracks the pressures in his heart, his temperature and his heart rate through a sensor in the right side of his heart. It automatically sends the measurements to a small, pager-like unit kept nearby. Each week, he plugs the device into any phone jack and downloads the data onto a secure website, where it's logged and analyzed by specially trained nurses at Brigham and Women's

Advanced Heart Disease Program. "It takes about five minutes," he notes.

Nationally, heart failure affects over 5 million people and accounts for more than 1 million hospital visits a year. In a study of 274 patients at 28 U.S. sites, Chronicle reduced hospitalizations and emergency room visits by 41 percent.

"It's an early warning system," says Lynne Warner Stevenson, MD, co-director of the Cardiomyopathy and Heart Failure Program at BWH. "We can pick up signs that therapy needs to be changed before the patient feels anything."

Stevenson, a leading investigator in trials of new devices for heart failure, helped design the Chronicle study and says the device is unique because it collects pressure readings from within the heart—data that would normally require invasive procedures to obtain. This allows for the quick identification of fluid buildup. For patients like Helfgot, medications are promptly adjusted—usually over the phone—when a problem is noticed.

"Identifying problems early can prevent hospitalization," notes Kimberly Brooks, RN, a BWH research nurse. "It can also save patients extra trips back to the clinic."

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The monitor offers psychological benefits as well. "It reduces your anxiety," says Helfgot. "No matter where you are, someone's looking out for you."

Tailoring treatments to fit each patient's lifestyle is a primary goal of heart disease treatment at BWH. "What patients are used to hearing is: You have to limit yourself because you

have heart failure," says Stevenson. "We approach it the other way. We find out what they want and need to do and how we can help them to achieve their goals."

Though mechanical devices offer innovative solutions, Stevenson is quick to credit a highly trained nursing staff for making the BWH program a success. "We've set up a human safety net for patients. They can call us anytime."

With this knowledge, Joseph Helfgot confidently prepares for his next trip. "Advanced heart disease is something you can live with—live *well* with." ■