The Christ Hospital Lindner Research Center

Quarterly Report Fall 2012



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A message from **Dr. Kereiakes**

Dear Readers,

Welcome to *The Lindner Center Quarterly Report*, a publication dedicated to providing you with information to keep you healthy and informed about leading-edge medical developments in the treatment of cardiovascular disease.

In this report, you will learn about the most rapidly growing and widely acclaimed new mechanical heart assist device (MHAD) program in the United States at The Christ Hospital. Built upon an expansive, highly sophisticated heart failure disease management program involving The Carl H. & Edyth Lindner Heart Failure Treatment Center, The Christ Hospital MHAD program has rapidly gained national recognition.

The success of our comprehensive, advanced heart failure program is based on multidisciplinary collaboration between cardiologists, cardiac surgeons, subspecialized nurses, pharmacologists, dieticians and social workers/case managers who are all focused on the care of patients with advanced congestive heart failure. MHAD and left ventricular assist devices (LVADs) offer a treatment option for patients in need of support as they wait for a heart transplant, and they provide the only option for the growing population of heart failure patients who are not transplant candidates. Our comprehensive, multidisciplinary team for heart failure care is unique in the Tri-State and is one of the premier programs in the Midwest. No other facility provides the scope of treatment options available at The Christ Hospital Heart and Vascular Center, which include investigational medicines, multiple adult stem cell/regenerative research protocols, as well as medical devices. For more information on treatment options available through The Christ Hospital Heart and Vascular Center and The Lindner Research Center, visit www.lindnerresearch.com, www.thechristhospital.com/mhad or call 513-585-2531.

As always, we urge you to discuss your symptoms and treatment options with your personal physician. We hope that the advanced expertise and care provided by these new programs will benefit you or your loved ones.

In good health,

Dean J. Kereiakes, MD

The **Christ Hospital**[™] Lindner Research Center The Christ Hospital Health Network

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The Lindner Center Quarterly Report's mission is to educate the Greater Cincinnati and Northern Kentucky community about heart and cardiovascular research, treatment and prevention.

> The Lindner Center for Research and Education is a wholly-owned subsidiary of The Christ Hospital.

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"Gold Standard" Care for Heart Patients

The Christ Hospital LVAD program achieves national recognition and important milestones,

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he Mechanical Heart Assist Device Program (MHAD) at The Christ Hospital is having a very successful year. In February, the hospital gained accreditation from The Joint Commission's Gold Seal of Approval[™], which enables the program to offer destination therapy treatment (DT) with left ventricular assist devices (LVAD). To Medicare

and select insurance companies, this certification allows the program to implant LVADs in patients who are not eligible for heart transplantation, which is most heart failure patients.

Representatives from The Joint Commission performed a rigorous twoday evaluation of The Christ Hospital MHAD program's staff, resources, protocols as well as patient outcomes, and conferred full accreditation upon the program. This important milestone has allowed The Christ Hospital MHAD program to have greater flexibility in choosing its candidates and has put The Christ Hospital on pace to do more than 20 LVAD implants in 2012.

Third-party payers have also acknowledged our program's success.

Humana has selected The Christ Hospital as the first nontransplant hospital in the region to gain coverage for stand-alone LVAD implantation in heart failure patients.

Thoratec, which manufactures the most widely utilized LVAD device (HeartMate II), has also given The Christ Hospital's program high marks and has listed us as one of its Gold Standard centers. Gold Standard centers have achieved ratings in the top 20 percent in the nation across multiple performance benchmarks including program quality and patient outcomes.

Additionally, The Christ Hospital's MHAD program received national recognition in May at the most recent Thoratec User's meeting held in Las Vegas. Representatives from LVAD programs across the nation gather at this meeting to share best practices and to discuss the future utilization of this technology.

The Christ Hospital's MHAD experience was presented by Dr. Egnaczyk, who highlighted the important collaboration between The Christ Hospital and its heart transplant partner, St. Vincent's Hospital in Indianapolis. Currently no adult heart transplant program exists in the city of Cincinnati. This partnership allows



patients in Cincinnati to be evaluated simultaneously for both heart transplantation at St. Vincent's and LVAD therapy at The Christ Hospital. These evaluations, which are performed at The Christ Hospital, are discussed via teleconference with physicians at St Vincent's Hospital. If the patient is deemed a good candidate for transplant, he or she is listed and will receive the surgery in Indianapolis when a suitable organ becomes available. If the person needs an LVAD either as a bridge to transplant or as destination therapy, the device is implanted at The Christ Hospital.

Maintaining this process locally is a tremendous asset and convenience for the people of Cincinnati and provides

them with easy access to both of these important and potentially life-saving therapies for advanced heart failure.

What Are LVADs?

Left ventricular assist devices are mechanical pumps that are surgically implanted to assume the pumping demands of the body's circulatory system when the heart is too weak or damaged to do the pumping. LVADs have been implanted since the 1980s, but earlier versions were so big and cumbersome that patients were required to remain in the hospital on the machine as they awaited transplantation.

In 1994, the first LVAD was implanted that allowed a patient



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to leave the hospital. These early pumps provided pulsatile flow, with intermittent forceful ejection of blood from the pump into circulation throughout the body, mimicking the normal heartbeat. A new pump design in which blood flow is continuously moved into circulation was introduced in the early 2000s. Since the so-called "continuous flow" pumps do not have a fill/pump cycle, the flow through the circulatory system is non-pulsatile. In other words, patients whose hearts are supported by these pumps often do not have a palpable pulse.

Continuous flow pumps have fewer moving parts, which results in greater durability and an estimated life span of approximately 10 years. The true durability of these pumps remains unknown, however, as they have only been in clinical use since 2005. Thus far, more than 10,000 HeartMate II LVADs (manufactured by Thoratec) have been implanted worldwide.

After extensive testing in scientific trials, continuous-flow LVADs have proven results in helping people live longer and more active lives. We have witnessed these benefits at The Christ Hospital, and they make us eager to extend this therapy to more people suffering heart failure. Our LVAD patients, who range in age from 33 to 78, have had complex cardiac and medical conditions. Most have suffered from heart failure for years and have exhausted conventional therapies for heart disease, which include medications, coronary artery stents, cardiac surgeries, and pacemaker devices.

Is An LVAD Right For You?

Who should be evaluated for advanced heart failure therapies? There are several red flags that suggest it may be time to seek evaluation. These include:

- Heart failure symptoms (shortness of breath, fatigue, dizziness) with mild exertion
- · Recurrent hospitalizations for heart failure
- High daily dose of diuretic (water pills) (> 80 mg furosemide per day)
- Not able to take a beta-blocker or ACE inhibitor due to side effects
- Renal failure with ongoing fluid retention
- An implanted defibrillator has delivered shocks, meaning that the patient suffered from a cardiac event that required intervention from the device

The timing of LVAD surgery is critical to obtain the best outcomes. Occasionally, heart failure progresses to the point where someone is no longer a good candidate for advanced heart failure surgeries due to excessive damage to the other organ systems.

We are excited and confident about our ability to offer this life-saving and lifestyleimproving therapy to people of the Greater Cincinnati area. To see if you are a candidate for this therapy, please contact The Christ Hospital Mechanical Heart Assist Device Program at 513-585-2531.

PATIENT PROFILE

DAN HENNING, 47, is a compassionate husband, father, grandfather, pastor, musician, friend—and a left ventricular assist device (LVAD) recipient.

Dan was first diagnosed with non-ischemic cardiomyopathy caused by an undetected virus that he contracted in 1992. Despite optimal medical treatment, his condition continued to decline. He dealt with extreme fatigue and shortness of breath. He was unable to walk more than 5 or 10 feet before requiring rest.

The Christ Hospital Ventricular Assist Device (VAD) team evaluated Dan for a VAD procedure and discussed all the options with him and his family. In December 2011, Dan received a Heart Mate II ventricular assist device.

Since implantation, Dan's quality of life has improved to the point of being able to actively return to musical performances with his bands and has been able to experience the joy of the birth of his first grandchild in February 2012.

Dan and his wife, Tami, now actively counsel prospective ventricular assist device candidates by sharing their story. For more information, contact the VAD Office, The Christ Hospital 513-585-2531 or www.TheChristHospital. com/MHAD.