

In 2016, the FDA approved the first leadless pacemaker to treat heart rhythm disorders. This tiny little wireless device, called a Micra transcatheter pacing system (TPS) is the world's smallest pacemaker. And in just a little over two years, the procedure was on the offering at Wooster Community Hospital.

It was a procedure that Dr. Cyril Ofori, a cardiology specialist, had been watching closely over the years. When he heard that it had been approved, his first thought was, "How can we bring this to WCH?" So he called the company that produces it to find out.

It turns out Ohio State University was one of the pioneer testing sites for this breakthrough technology and Dr. Ofori could get certified there. "It's great to have a resource like this within an hour and a half of Wooster," he said. "I have always wanted to make sure that people in Wooster have access to the same quality of care that you have in Cleveland and Columbus and other big cities." The hospital administration was fully behind him in this endeavor. "They've always been very proactive in providing the best health care locally," he said.

Dr. Ofori spent a few days at OSU learning the procedure and in the fall of 2018, implanted his first Micra pacemaker at WCH.

Patients have to meet several criteria to be a candidate for this procedure, he said. "You have to be high risk for a traditional pacemaker and thought to be an appropriate candidate for a leadless pacemaker."

Bill Weekley, of Wooster, met the criteria. Bill had undergone bypass surgery in 2003 and was doing quite well. He was enjoying his retirement from Rubbermaid after 35 years and especially enjoyed spending time with his family that included three great-grandchildren. But in the last few years, he noticed he was feeling increasingly fatigued. His heart rate was often low. Dr. Ofori monitored him closely during the past year and finally, in December, he thought the time was right for a pacemaker.

Timing is critical, said Dr. Ofori. Because batteries in pacemakers have a lifespan, "You don't want to do it before you have to."

Bill had started waking up at night feeling "breathless" from his low heart rate. His BPM was often in the 30's. It was starting to interfere with some of his usual activities. "It was time for a pacemaker," Dr. Ofori said.

Bill was a great candidate for this pacemaker because he needed help with regulating the lower chambers of the heart. "This procedure is not yet approved for regulating the upper chamber of the heart," said Dr. Ofori, "although we expect that to happen in the next 5 to 10 years."

On Dec. 20th, Dr. Ofori implanted the Micra pacemaker into Bill's heart. The pacemaker is tiny, no more than the size of a large multi vitamin capsule. Traditional pacemakers are the size of "a large men's watch," said Dr. Ofori.

This device is inserted through the groin, eliminating the need for a chest incision. It requires no wires and its battery life is 12-14 years instead of the 8-10 years for a traditional pacemaker. During the procedure, a sheath is inserted through the groin and the pacemaker is threaded up the sheath into a lower heart chamber. Here, it is fastened to the heart muscle with small hooks.

Because there are no wires to deal with, there are less complications, said Dr. Ofori. There is no chest incision to get infected. There are no wires to come loose or connections to worry about. The device can be monitored from a computer and results sent to Dr. Ofori's office remotely. This means Bill and his wife, Martha, can travel at will. The device monitors Bill's heart rate and regulates it when necessary. It will allow a heart rate of up to about "140 beats per minute," said Dr. Ofori. "That's enough for most normal activity and moderate exercise."

Bill was out of the hospital the next day with no restrictions except to keep the area in the groin where it was inserted dry and free from injury. "It does the job," said Bill. "It keeps my heart rate above 50. I feel better than I have in years."

Bill is grateful he could have the procedure done locally. "I knew I had the best doctors and hospital right here," he said. "I really appreciate Dr. Ofori. He has cared well for me for many years."

And he would recommend the procedure to anybody who needs it. Dr. Ofori would too. "It has a 99% implant success rate so far and we're seeing far less complications." He's grateful to a hospital that lets him pursue the latest technology. "WCH has always been very supportive and encourages us to bring new innovation here. It's great to be part of that."