

# Patients who received donated pacemakers survive without complications

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Patients who received refurbished pacemakers donated from Detroit area funeral homes survived without complications from the devices, according to a case series reported by the University of Michigan Cardiovascular Center.

The pacemakers were implanted in 12 patients at the University of Philippines- Philippine General Hospital who could not afford advanced cardiac care and were confined to their beds as they waited for a permanent [pacemaker](#).

All donated pacemakers functioned normally at six months, and most importantly there were no device complications such as infections. The study appears online ahead of print in the Oct. 13 issue of the [Journal of the American College of Cardiology](#).

The argument for pacemaker reuse has been debated for decades. But the idea is gaining ground as U-M cardiology experts report promising results of providing donated pacemakers to underserved nations.

"In light of the widening health care disparity seen between the industrialized world and developing nations, we feel that pacemaker reuse is an ethical obligation to address the medical needs of those who could not afford therapy otherwise," says co-author Timir Baman, M.D., cardiology fellow at the U-M Cardiovascular Center.

Based on surveys showing a majority of heart patients were interested in

donating their pacemakers after death, U-M has launched Project My Heart Your Heart.

Project My Heart Your Heart is a joint collaboration between the University of Michigan Cardiovascular Center, Michigan funeral homes, and World Medical Relief, a Detroit-based non-profit organization that specializes in the delivery of used medical equipment.

"Ongoing research is needed to evaluate the feasibility of regional and potentially nationwide pacemaker donation programs," says co-author Kim Eagle, M.D., director of the U-M Cardiovascular Center.

In recent decades, industrialized nations have seen a drop in deaths from heart attacks and strokes, but those in low- and middle-income nations continue to experience an epidemic of cardiovascular disease.

The prevalence of cardiovascular disease is expected to increase 137 percent between 1990 and 2020 for those living in low- and middle-income countries, authors write. It's estimated that as many as 1 million people worldwide die annually from slow heart rates.

"Many of these countries lack the financial resources to address this epidemic of cardiovascular disease," says co-author Hakan Oral, M.D., director of electrophysiology at the U-M cardiovascular center. "As a result, resources are often directed away from high-cost treatment strategies, such as implantable cardiac rhythm management devices."

Pacemakers and other implantable cardiac devices are implanted to regulate an irregular or slow heart beat, or act as an insurance policy by automatically shocking the heart back to a normal rhythm. They can last up to 10 years and cost \$10,000 to \$50,000.

Only pacemakers with 70 percent battery life were included in the study

and informed consent was obtained from all patients' families in order to remove and donate the pacemakers after death. A total of 50 pacemakers were donated by funeral homes to WMR. Of them, 12 with adequate battery life were implanted in poor patients at Philippine General Hospital in Manila.

U-M is exploring partnerships with the Philippine General, Vietnam [Heart](#) Institute in Hanoi, and Komfo Medical Center in Ghana, which is in the process of developing an arrhythmia therapy program, for allocation of used pacemakers. The international hospitals have had on-site reviews for quality and clinical excellence by U-M cardiology experts.

In the next phase, the U-M Cardiovascular Center will seek approval from the U.S. Food and Drug Administration to embark on a large scale clinical trial to show that pacemaker reuse is safe and effective.

Source: University of Michigan Health System ([news](#) : [web](#))

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