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Pacemaker recycling: A notion whose time has come

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Abstract

The purpose of this paper is to summarize the need, feasibility, safety, legality, and ethical perspectives of pacemaker reutilization in low- and middle-income countries (LMICs). It will also describe, in-depth, Project My Heart Your Heart (PMHYH) as a model for pacemaker reuse in LMICs. The primary source of the discussion points in this paper is a collection of 14 publications produced by the research team at The University of Michigan and its collaborative partners. The need for pacemaker reutilization in LMICs is evident. Numerous studies show that the concept of pacemaker reutilization in LMICs is feasible. Infection and device malfunction are the main concerns in regard to pacemaker reutilization, yet many studies have shown that pacemaker reuse is not associated with increased infection risk or higher mortality compared with new device implantation. Under right circumstances, the ethical and legal bases for pacemaker reutilization are supported. Project My Heart Your Heart (PMHYH) is a proof of concept pacemaker donation initiative that has allowed funeral home and crematory directors to send explanted devices to an academic center for evaluation and reutilization before donation to underserved patients in LMICs. The

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