

Post-Mortem Cardiac Device Retrieval for Re-Use in Third World Nations: Views of the General Public and Patient Population

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Introduction: The escalating inequality of healthcare between rich and poor countries appears to be widening, especially in the field of electrophysiology. Cardiovascular disease has an increasing impact on morbidity and mortality in many developing countries, many of which already face a disproportionate burden of infections leading to abnormalities of the conduction system. Novel methods of delivering costly electrophysiologic healthcare to impoverished nations are needed. The purpose of this study is to determine the views of the public as well as patient population regarding post-mortem retrieval and donation of pacemakers (PMs) and implantable defibrillators (ICDs).

Methods: Data was collected from 1009 subjects of the general population in the University of Michigan internal medicine clinics and 100 patients with PMs and ICDs using an anonymous survey. Survey items were developed to assess current knowledge and opinions regarding utilization of post-mortem cardiac devices.

Results: The average age of the participants was 53 ± 15 years. 46% of the cohort was men while 54% were women. Prior to our study, 57% of individuals were not aware of disposal methods of cardiac devices after death. If given the choice, 87% of the patient population and 71% of the general public were willing to donate a device to those in need in other countries while 53% agreed to explantation for product improvement analysis. 42% would agree to device retrieval for use by veterinarians in animal hospitals. A large minority (45%) of the general population believed that device donation would help ease the loss of a loved one. Willingness to consent for device removal was not associated with age, sex, or ethnicity.

Conclusions: As the prevalence of cardiovascular disease increases throughout the world, innovative methods of delivering healthcare to underserved nations must be explored. A great majority of the general public and patient population is willing to consent to cardiac device removal for philanthropic reuse in underserved nations around the world.