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Keeping People in Rhythm Electronically – An Overview of Cardiac Rhythm Management Devices

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Core Concept: Use of outside energy to stimulate the heart – for pacing and defibrillation.

The history of cardiac rhythm devices reflects a remarkable evolution in cardiovascular medicine, driven by technological innovation and a deepening understanding of electrophysiology. The journey began in the 1950s with the invention of the first implantable pacemaker, a groundbreaking solution for bradyarrhythmias. Over the decades, Cardiac Rhythm Management (CRM) devices have expanded to include Implantable Cardioverter-Defibrillators (ICDs), Cardiac Resynchronization Therapy (CRT) devices, and leadless pacemakers. These advancements have been fueled by improvements in battery life, miniaturization, telemetry, and device programming. Modern devices not only correct life-threatening arrhythmias but also provide real-time diagnostics and remote monitoring capabilities. This overview traces the historical milestones and technological advancements that have shaped cardiac rhythm devices, highlighting their growing role in improving patient outcomes and quality of life in those with heart rhythm disorders.