

# “Somebody Help Me... I’m Stayin’ Alive.” Putting Into Context the Burgeoning of Sudden Cardiac Deaths

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## Abstract

The surge in sudden cardiac deaths (SCDs), especially among the young, has become a global concern impacting economies and healthcare systems. In Western societies, SCD accounts for up to 20% of all deaths, while in the United States, it is the primary cause of cardiovascular-related mortality. Sudden Cardiac Arrest (SCA) and SCD, stemming from cardiac activity disruption, necessitate urgent intervention, with defibrillation playing a crucial role. In the Indian context, challenges arise from the incomplete determination of causes of death. The limited application of the Medical Certification of Cause of Death (MCCD) contributes to this issue. A population-based study in India reveals a substantial SCD rate, estimating approximately 700,000 cases annually. India faces a burgeoning cardiovascular crisis, necessitating proactive strategies to prevent heart diseases and SCDs. Prioritizing preventive measures, public awareness, and emergency response are critical components. By embracing these measures and campaigns, such as FIT INDIA and EAT RIGHT, India can pave the way for a healthier future and reduce the burden of cardiovascular diseases and SCDs.

**Keywords:** Sudden Cardiac Death, Sudden Cardiac Arrest, Cardiovascular Diseases, Medical Certification of Cause of Death

## 1. Introduction

The surge in the incidence of Sudden Cardiac Deaths (SCDs), particularly in the young, has been an eye-opener. From celebrities to ordinary Indians, the tidings about people dying due to cardiac arrests have been hitting the shores now and then. The ubiquitous presence of this catastrophe makes it a global phenomenon, given that an increase in incidence has a detrimental impact on the world economy. The available data figures on the global burden of SCDs indicate a clear geographical imbalance as most of the published material in this field comes from North America, Western Europe, and a few countries in the Asia Pacific <sup>[1]</sup>. In Western societies, it accounts for up to 20% of all deaths <sup>[2]</sup>. In the United States, SCD is the most common cause of death, responsible for more than 50% of deaths due to cardiovascular diseases <sup>[3]</sup>.

Sudden Cardiac Arrest (SCA) and SCD refer to the abrupt cessation of heart activity. The event is termed as SCA (or aborted SCD) if a timely intervention such as use of an Automatic External Defibrillator/ Implantable Cardioverter Defibrillators (AED/ICD) or spontaneous reversion restores

circulation, and the event is called SCD if the patient does not survive within an hour of symptom onset. Simply put, SCA is a critical emergency in which the heart ceases its rhythm due to an electrical collapse, resulting in insufficient oxygen supply to the body's cells. Immediate application of a defibrillator can have life-saving effects. SCD carries significant psychological, financial, and healthcare system ramifications, underscoring the importance of prompt identification and management.

India faces unique challenges, as only a proportion of deaths have ascertained causes. This can be attributed to the utilization of the Medical Certification of Cause of Death (MCCD) solely within specific establishments designated by the Chief Registrar of Births and Deaths. In specific states, the MCCD is limited to medical colleges and specialized hospitals; in others, it pertains solely to district hospitals and Primary Health Centres (PHCs) <sup>[4]</sup>. A population-based study in India used a verbal autopsy method involving medical students in Andhra Pradesh to investigate SCD rates. SCD accounted for approximately 10.3% of total mortality. Extrapolating these results to the national death rates, it can be estimated that India experiences roughly 700,000 cases of SCD annually <sup>[5]</sup>.

India today stands at the crossroads of a burgeoning cardiovascular health crisis. As the country battles an alarming rise in heart diseases and sudden cardiac deaths, embracing the age-old wisdom that "an ounce of prevention is worth a pound of cure" is crucial. By prioritizing preventive measures, we can save countless lives and alleviate the burden on our healthcare system. The immediate focus should be on health promotion, primary and secondary prevention programs, awareness and training programs on Basic Cardiopulmonary Life Support (BCLS) for the general public, especially young athletes, the more extensive reach of first responders, efficient Control, Command, and Facilitation Centre, 24\*7 availability and accessibility to world-class ambulance services with trained Emergency Medical Technicians, optimal integration with hospital care, and compliance with evidence-based medical therapy.

The American College of Cardiology and the American Heart Association released a set of comprehensive measures in the effort to prevent SCDs which includes:

- Smoking or other tobacco products cessation intervention in patients who have suffered SCA.
- Screening for family history of SCD.
- Screening for asymptomatic left ventricular dysfunction, a kind of heart failure that makes breathing tough, in people with a strong family history of cardiomyopathy and SCD.
- Referring kin of hospitalized patients with known heart conditions which raise the risk of SCA for education in Cardio-Pulmonary Resuscitation (CPR) and the use of an AED.
- Educating first-degree relatives of people who have survived sudden cardiac death linked to an inherited condition about the need for screening.
- Preventing SCD in individuals with heart attack and a reduced ejection fraction by pharmacological interventions guided by guidelines.
- Using ICD in patients with heart failure and reduced ejection fraction, where the heart isn't adequately pumping blood, who are predicted to survive more than one year.
- Counseling eligible patients about the usage of ICDs.

Investing in prevention is not just a slogan but the need of the hour. As individuals, families, and a nation, we must embrace the power of preventive measures to combat the rising tide of cardiovascular diseases and sudden cardiac deaths. Let us unite in our resolve to prioritize our health, empower ourselves with knowledge, Participate, and make the campaigns like FIT INDIA and EAT RIGHT, a Jan Andolan (People's movement) and build a healthier future for India. The choice is ours.

## 2. Conflict of Interest

The authors declare no conflicts of interest.

## 3. References

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