

# Incidence and outcome of sudden cardiac death in Split-Dalmatia County, Croatia

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**Introduction:** Sudden cardiac death (SCD) is mostly defined as a natural death due to cardiovascular cause that occurs within one hour of the onset of symptoms.<sup>1</sup> Out-of-hospital SCD frequency is underestimated because it reflects the cases treated by emergency medical services (EMS) only, which amounts to some 50-60% of the global incidence. Moreover, it is highly variable, ranging from 38 to over 84.7 per 100,000 inhabitants per year; in Croatia 62/100,000<sup>2</sup> or some 9000 victims per year. SCD survival to hospital discharge is also widely variable, ranging from 0.3% to 20.4%.<sup>1,2</sup> The aim of this study was to assess the SCD incidence and survival rate among the victims resuscitated by EMS in Split-Dalmatian County.

**Methods:** From the Split-Dalmatian County EMS electronic data base analyzed were all SCD case reports (Utstein forms) from January 1, 2017 to December 31, 2017. Data on etiology and outcome for hospitalized SCD individuals were extracted from patients' files, discharge letters and/or autopsy notes.

**Results:** During the investigated period there were 291 EMS treated victims of presumed SCD (69/100,000). Sudden death mostly (68%) happened at home, lay CPR on the spot was performed in 12 cases (4.1%) only, with no instance of lay defibrillation. Hospitalized were 32 (11%) such individuals, 21 surviving to hospital discharge (7.2%).

**Conclusion:** The identified weak links in the survival chain must be improved, e.g. for low SCD survival rate - assure public access to lay defibrillation, such as "Start the Heart - Save the Life" program in Croatia; for lay defibrillation lack - provide as many AEDs as possible, form a network of devices, and educate a large number of volunteers; for the prevalent SCD occurrence at home - train family members of patients at elevated risk in CPR.

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## LITERATURE

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